Textile Industries

JANUARY 1949

PER. SECT. 23

formerly COTTON Textile Industries

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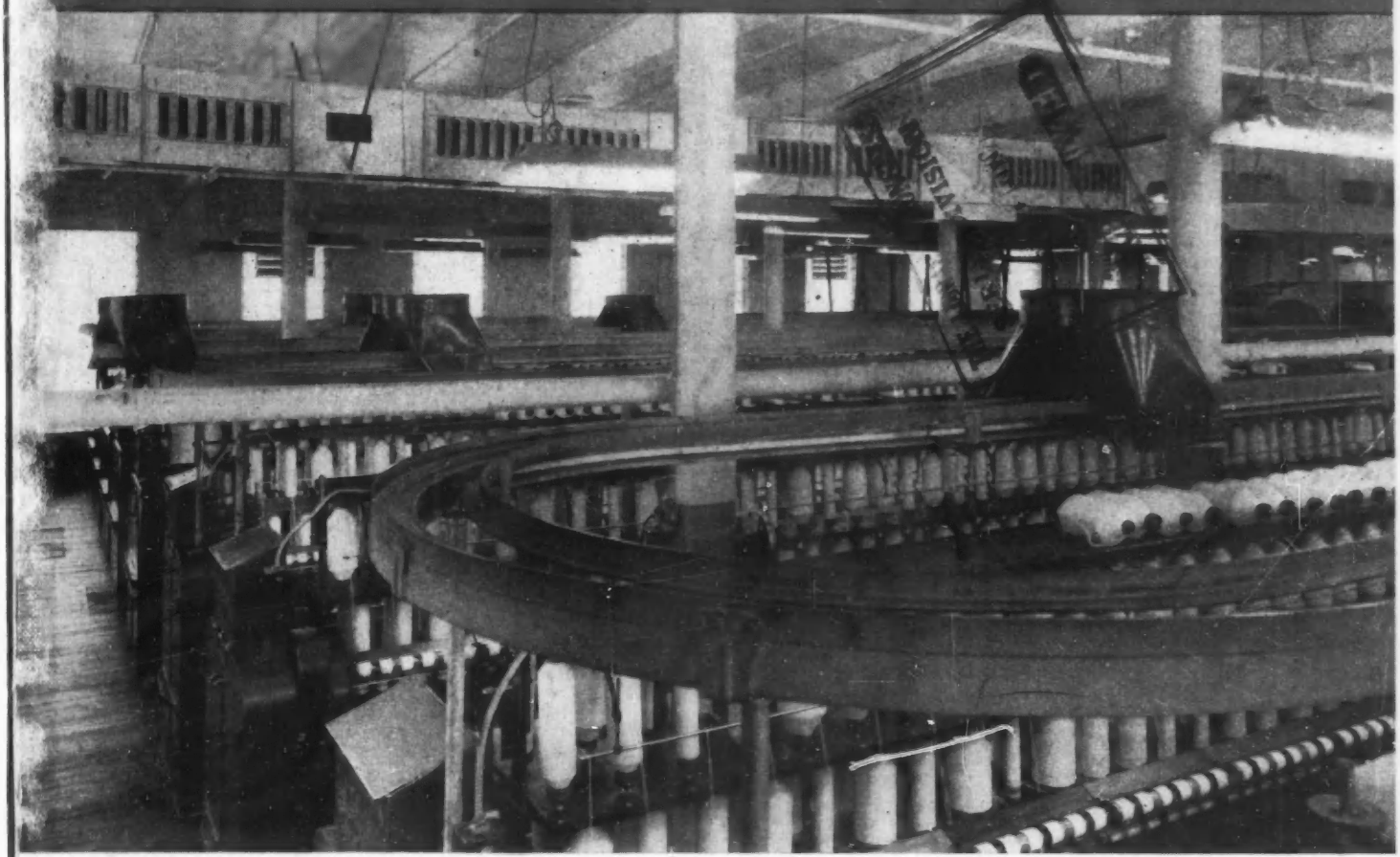

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TEXTILE INDUSTRIES is published monthly at 116 E. Crawford St., Dalton, Ga., by W. R. C. Smith Publishing Company, Dalton and Atlanta, Ga., U. S. A.
Executive and Editorial Offices: 806 Peachtree St., Atlanta 5, Ga.
Subscription Rates, United States and Possessions, $2.00 for one year; Canada, South America, Central America, $2.00 per year; Foreign Countries, $5.00 per year.
Entered as second-class matter at the Post Office, Dalton, Ga., under the Act of March 3, 1879.

Volume 113 Number 1

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Look For This Trade Mark

The Draper "Diamond D" is your guarantee for genuine loom repair parts. Today, with new machinery still so difficult to obtain, it is imperative that existing looms be maintained in top notch operating condition. Draper repair parts insure this.

They are cast from iron whose physical properties and chemical analysis have been predetermined by our research department to provide long life and durability. Daily tests in the laboratory assure uniform quality.

Each casting is made from the same pattern equipment as the parts on your original looms.

They are finished in the same jigs and fixtures.

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Look for the "Diamond D" —your assurance of uniform repair parts that will fit your looms.

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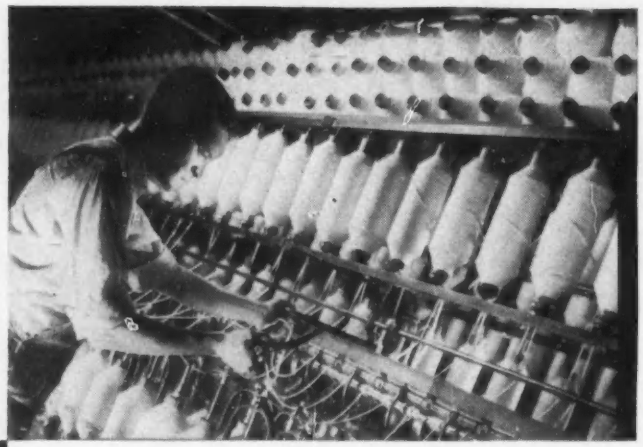

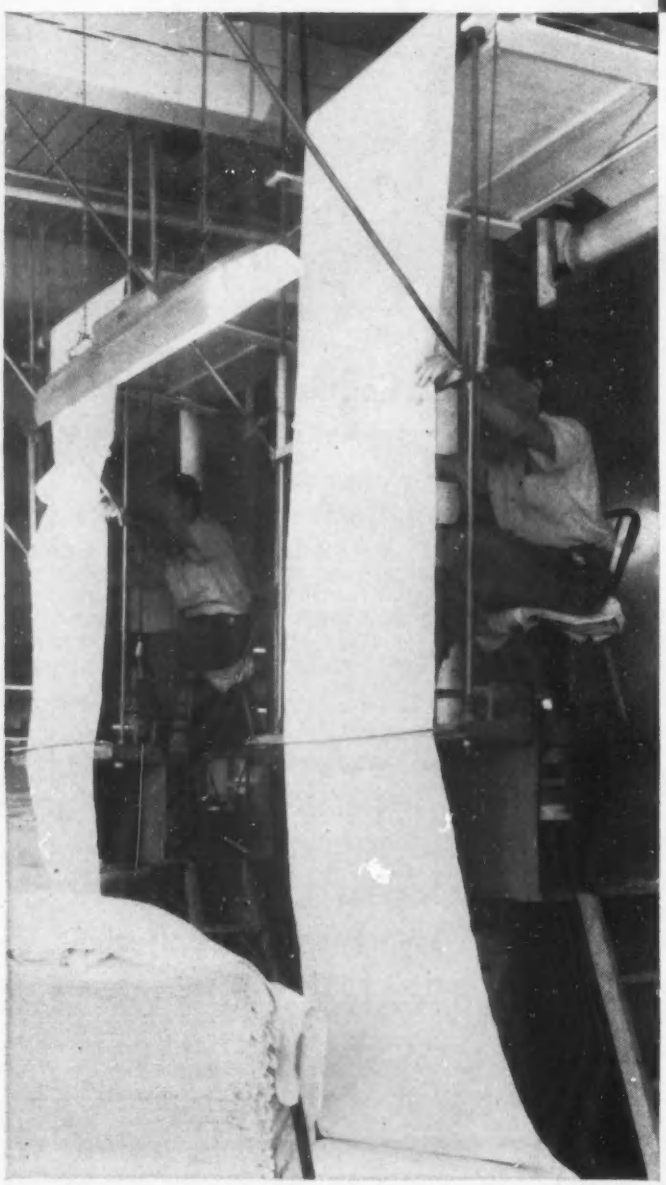

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Texaco Stazon doesn't splatter, creep or drip . . . virtually eliminates oil stain. Moreover, *Texaco Stazon* is a highly stable lubricant. It does not form gummy deposits and is not affected by humidity. Applications last longer, so fewer are needed.

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TEXACO Lubricants

FOR THE TEXTILE INDUSTRY

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Textile Industries

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Payment for contributed articles is made upon acceptance, before publication.

"Textile Industries" has the largest circulation among the mills of the United States of any textile publication.

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ANNUAL SUBSCRIPTION
U. S., CANADA, PAN-AMERICA—$2.00
FOREIGN—$5.00

Published Monthly at 115 E. Gordon, Dalton, Ga.

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Editorial and Executive Offices
806 Peachtree St., N.E., Atlanta 5, Ga.

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UNUSUAL *Automatic System* HAS 200 CARRIERS TRAVELING BY GRAVITY

Handles and Stores Empty Hosiery Trucks

WHAT THE SYSTEM HAS ACCOMPLISHED

1 Time spent pushing and handling hosiery trucks has been drastically reduced.

2 Large storage warehouse which would be required for storing the trucks is saved because overhead ceiling space is now used for this purpose.

3 If it were not for the Tramrail System, a new building addition would probably have been necessary.

4 An elevator on which the trucks formerly were taken from the first to third floor has been relieved of work that formerly taxed its capacity.

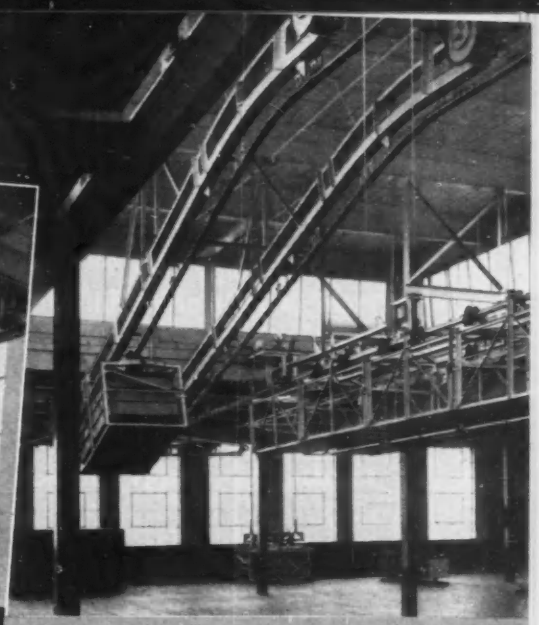
5 The cost of an additional elevator which would have been necessary to take care of additional trucks required because of greatly increased output, was saved.

6 Costly maintenance formerly required because of hosiery truck castors wearing floors has been largely eliminated.

7 The system introduced an efficient means of handling the trucks, expedited their delivery, and greatly cut the costs of this work.

…ading station on first floor. Two …mpty hosiery trucks are elevated … third floor on each trip. Depress… …g pushbutton (on wall) starts car… …r up and on its way. As soon … it has cleared lift section D on …ird floor, another empty carrier …mes down to this position auto…atically.

Loaded carrier coming up from first floor and about to leave lift section D. The carriers have no motors or other propelling drives. They are equipped, however, with centrifugal brakes to prevent excessive speeds.

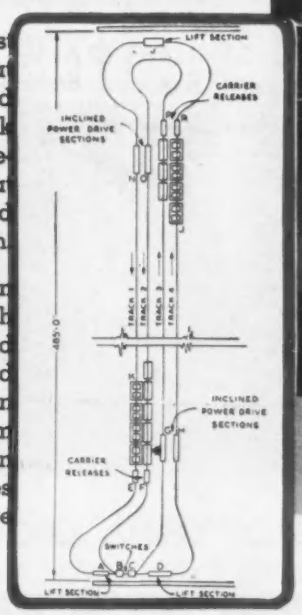


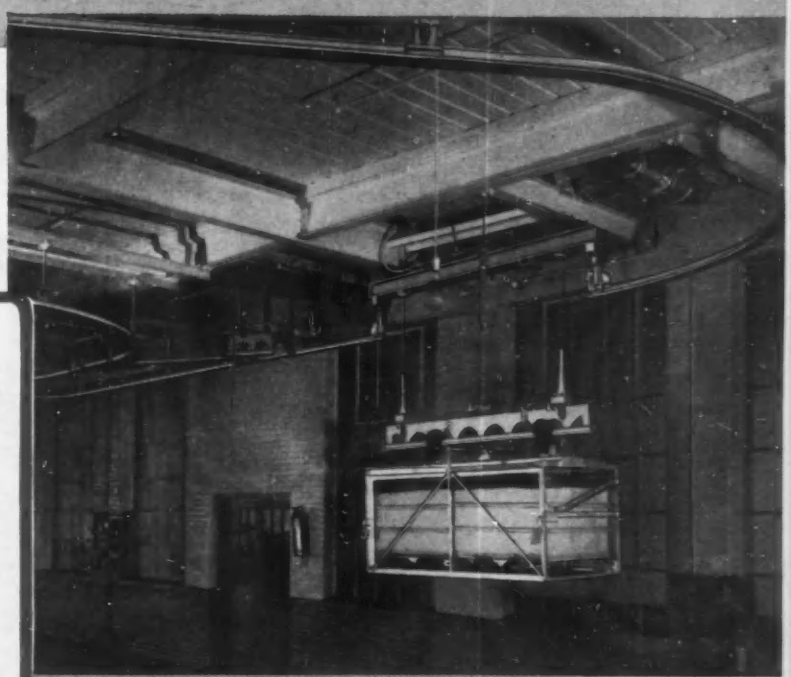
Carrier being taken up to high end of track 4 on inclined power drive section H. This carrier has just left lift section D.

CLEVELAND Tramrail system at Hanes Hosiery Mills Company, Winston-Salem, North Carolina, producers …dies' nylon and rayon hosiery, is unique because while … entirely automatic in operation, its 200 carriers run by …vity. The carriers convey and store empty hosiery trucks, …dling two at a time.

…he trucks are carried from the firs… …r to the third floor on a lift section a… …ee sketch) and travel by controlled …vity down track 4 and return on track …n which they are stored until re… …ed. Trucks in storage are released a… …section A, but also may be released …by stopping carriers passing through…

…fter the trucks in a carrier have been …oved at A, the carrier travels through …tches B and C, down track 3 and …ms on track 2, where it is stored … needed on the first floor. As soon … a loaded carrier is dispatched from … first floor and leaves lift section D on … third floor, another carrier comes …n and takes its place, ready for more …pty hosiery trucks.





Lowering a carrier at lift section J where trucks will be pushed out on floor. The section will then be raised so that it interlocks with stationary track and carrier will continue on its way automatically.

Only seven motors are required for the entire system. These operate the three lift sections and the four inclined power drives which convey the carriers to the high ends of tracks. This is one of many types of Cleveland Tramrail automatic dispatch systems now in operation in a number of Textile Mills.

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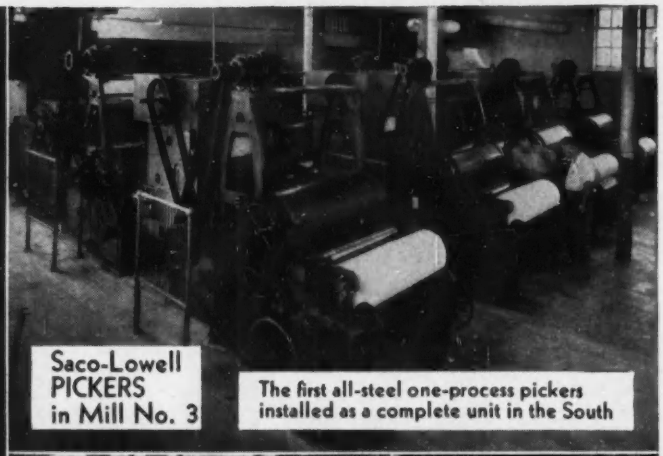
CLEVELAND TRAMRAIL
OVERHEAD MATERIALS HANDLING EQUIPMENT

CHINA GROVE MILL NO. 3

Demand for China Grove high quality thread yarns is being met by Saco-Lowell equipment in their new Mill No. 3, now in production.

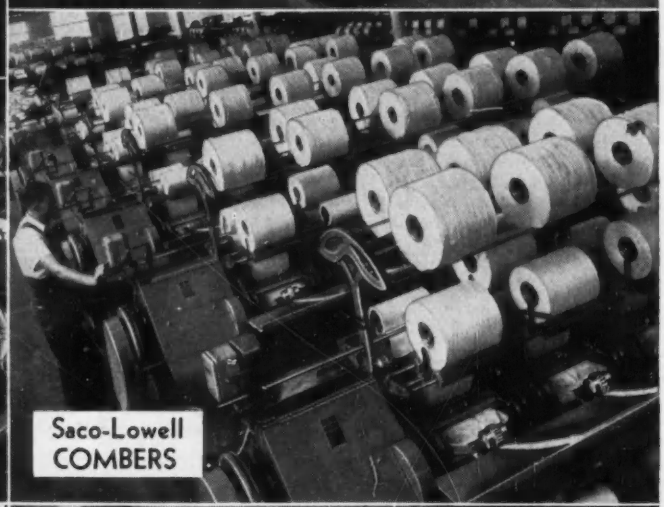
Saco-Lowell equipped, from picking through twisting, this mill will soon be setting a new standard for quality, economy and production.



Saco-Lowell PICKERS in Mill No. 3

The first all-steel one-process pickers installed as a complete unit in the South

Saco-Lowell CARDS



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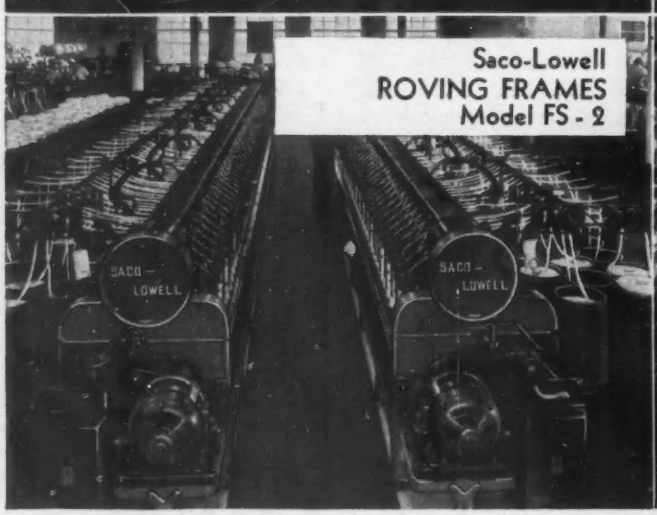
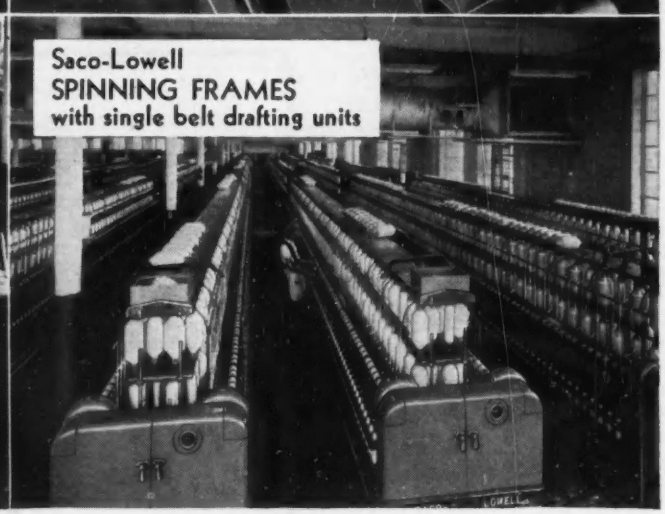


Saco-Lowell ROVING FRAMES Model FS-2



Saco-Lowell SPINNING FRAMES with single belt drafting units

INTERIOR VIEWS OF CHINA GROVE MILL NO. 3

SACO-LOWELL

60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD, MAINE

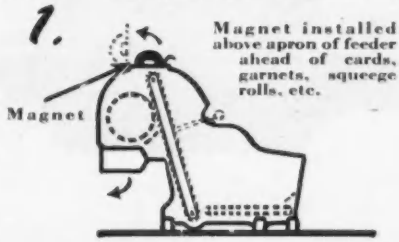
SALES OFFICES: CHARLOTTE • GREENVILLE • ATLANTA

The A-B-C's of *Eriez* Permanent Magnetic Protection for Textile Mills

BASICALLY, there are three types of Eriez Permanent Non-Electric Magnetic Separators for the textile industry . . . Eriez Plate Magnets, Magnetic Pulleys, and Magnetic Humps. Each has been specifically designed to provide essential magnetic protection necessary in various parts of the mill. Reference to the diagrams below gives an idea of some of the more popular applications and of the Eriez methods developed to scientifically remove tramp iron. Magnetic protection, properly applied, can eliminate fire and production shutdowns—plus—damage to card and garnet clothing. The thousands of successful applications and the diversity of installations make Eriez best qualified to handle your separation problems. Have an Eriez engineer recommend the permanent magnetic equipment you need to give you complete protection against tramp iron!

A. PLATE MAGNETS

1. Magnet installed above apron of feeder ahead of cards, garnets, squeege rolls, etc.



2. Plate magnet installed in the discharge chute of a Centrif-Air Superior Cleaner.

3.

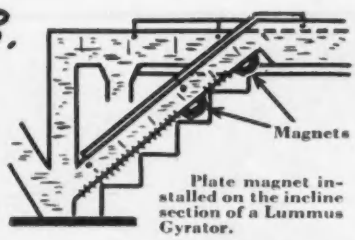
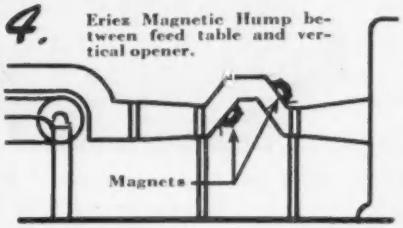


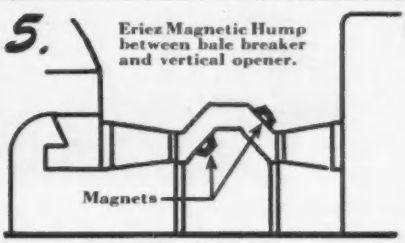
Plate magnet installed on the incline section of a Lummus Gyrator.

B. PNEUMATIC LINES

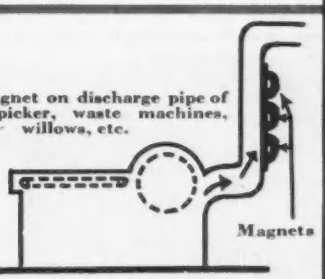
4. Eriez Magnetic Hump between feed table and vertical opener.



5. Eriez Magnetic Hump between bale breaker and vertical opener.

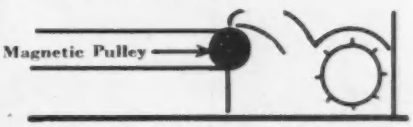


6. Eriez Magnet on discharge pipe of mixing picker, waste machines, willows, etc.

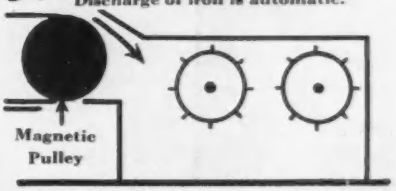


C. MAGNETIC PULLEYS

7. Eriez Magnetic Pulley insta. ed in feed table protects vertical opener from tramp iron.



8. Magnetic pulley installed as head pulley on conveyor feeding cleaner. Discharge of iron is automatic.



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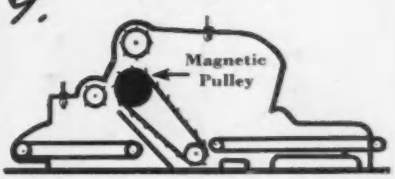

H & B Bale Breaker showing location of magnetic pulley on spiked apron.

Eriez Non-Electric Permanent Magnets Give You These *Advantages*

1. Superior Cleaning Ability. 2. No Wiring for Electric Current Needed . . . No Coils To Burn Out. 3. Cool Running . . . No Loss of Magnetism Through Heating Up. 4. Not Affected by Moisture or Wet Materials. 5. No Operating Costs . . . First Cost is Last Cost. 6. Minimum Installation Cost. 7. Simple . . . Powerful . . . Permanently Magnetized. 8. Uninterrupted Operation . . . Top Efficiency Always. 9. Easily Installed in Original Equipment.

Pioneer of PERMANENT Magnetic Separation

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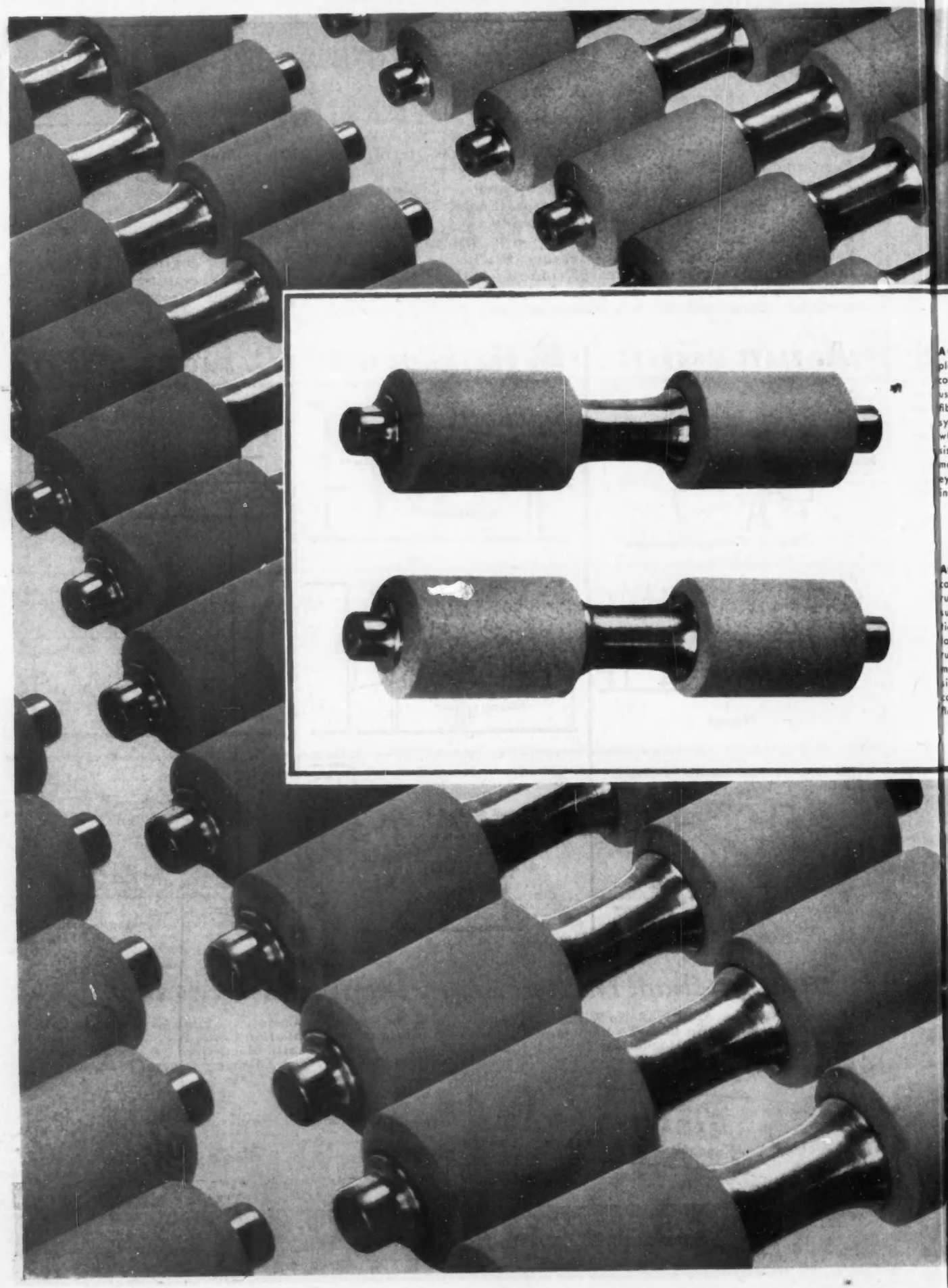

ACCOTEX J
plain synthet
compound e
useful where
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ACCOTEX N
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flat clearers.

ARMSTRONG DISCOVERY UPSETS OLD IDEAS ON THE CAUSE OF TOP ROLL LAPPING

Research reveals little known force that attracts fibers to roll covers

Contrary to popular belief, static electricity has little effect on top roll lapping. Armstrong researchers found, instead, that the probable cause of this troublesome problem is an attraction resulting from a force known as the electrokinetic potential.

This attraction occurs in a water film of molecular thickness, such as is deposited on cots and fibers by the humid air in textile mills. Thus when ends break, the forces present in the water film attract the fibers to the top roll and cause them to lap.

To verify their conclusion that static electricity has little effect on lapping, Armstrong scientists made special cots that would conduct electricity. These static-free cots lapped just as badly as ordinary cots that had not received special treatment.

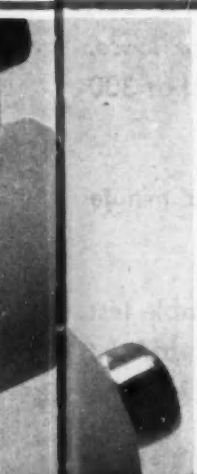
In their work, Armstrong rubber chemists made cots from compounds to which they had added materials called electrolytes. These ran with virtually no lapping. Only certain electrolytes had this effect. Research into little known branches of chemistry finally uncovered the reason for this action. In brief, these electrolytes effectively eliminated the attraction of the water film.

For some time, all Accotex® roll covers have incorporated this exclusive Armstrong feature. The reason behind their lap resistance, however, could not be revealed until recently when patents on this technical improvement were issued to Armstrong.

This development is typical of the work that is constantly being done at Armstrong to help you produce better yarn, faster and more economically. Whether you're spinning cotton, wool, or synthetics, Armstrong can supply a roll cover specifically designed for the job. Your Armstrong representative will gladly arrange a test run of these improved Accotex Cots in your mill. Call him today or write to the Armstrong Cork Co., Textile Products Dept., 3601 Arch Street, Lancaster, Pa.

ACCOTEX J-490. A plain synthetic rubber compound especially useful where synthetic fibers are run on cotton system equipment or wherever high lap resistance is necessary. For maximum freedom from eyebrowing, use revolving clearers.

ACCOTEX NC-727. A cork-loaded synthetic rubber that combines the superior drafting qualities of cork with the longer life of synthetic rubber. Designed for maximum eyebrow resistance in a synthetic cot. May be used with flat clearers.



AVAILABLE FOR EXPORT

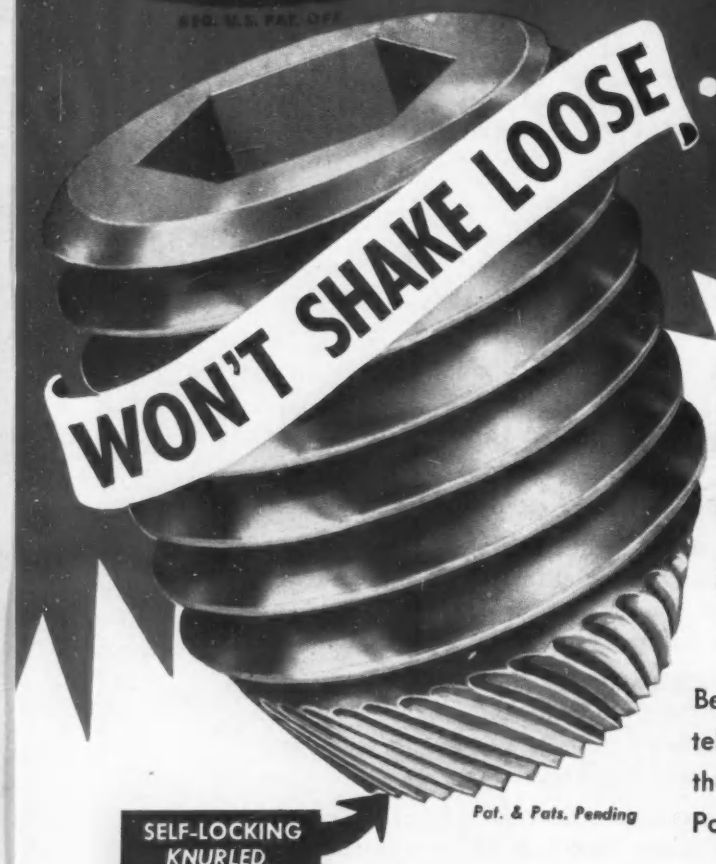
ARMSTRONG'S ACCOTEX COTS

CORK COTS • ACCOTEX APRONS • ROLL SHOP EQUIPMENT

UNBRAKO

REG. U.S. PAT. OFF.

WON'T SHAKE LOOSE, ... proved by



EXPLANATION OF VIBRATION TESTS DEMONSTRATING THE HOLDING POWERS OF DIFFERENT TYPES OF "UNBRAKO" SOCKET SET SCREWS

Better than words, the graph of actual vibration tests quickly tells the story of the exceptional "HOLDING POWER" of the "Unbrako" Self-Locking Set Screw with the Knurled Cup Point . . . *"the screw that won't shake loose."*

Vertically, the graph is divided into increments of 30 minutes. Each bar—black for Plain Cup Point and red for Knurled Cup Point—represents a screw tested and the number of minutes at which it loosened. *The height of each black bar, therefore, is a direct measure of the length of time before the plain pointed screw shook loose.* The Self-Locking Knurled Cup Pointed Screws—indicated by the red bars—were still tight at 300 minutes.

All screws were tested under identical conditions. Rate of vibration—1750 cycles per minute . . . duration of test—until screw shook loose or tests were discontinued.

Analyzing the graph and comparing the two types of screws, we find that the most favorable test of the Plain Cup Point shows a failure at 10 minutes and 40 seconds. *No Knurled Cup Point shows signs of loosening at 300 minutes—more than 28 times the "HOLDING POWER" of the Plain Cup Point—a tremendous superiority . . . as proven by actual tests and use.*

The "Unbrako" Self-Locking Set Screws with the Knurled Cup Point can be used over and over again.

OVER 45 YEARS IN BUSINESS

STANDARD PRESSED STEEL CO.

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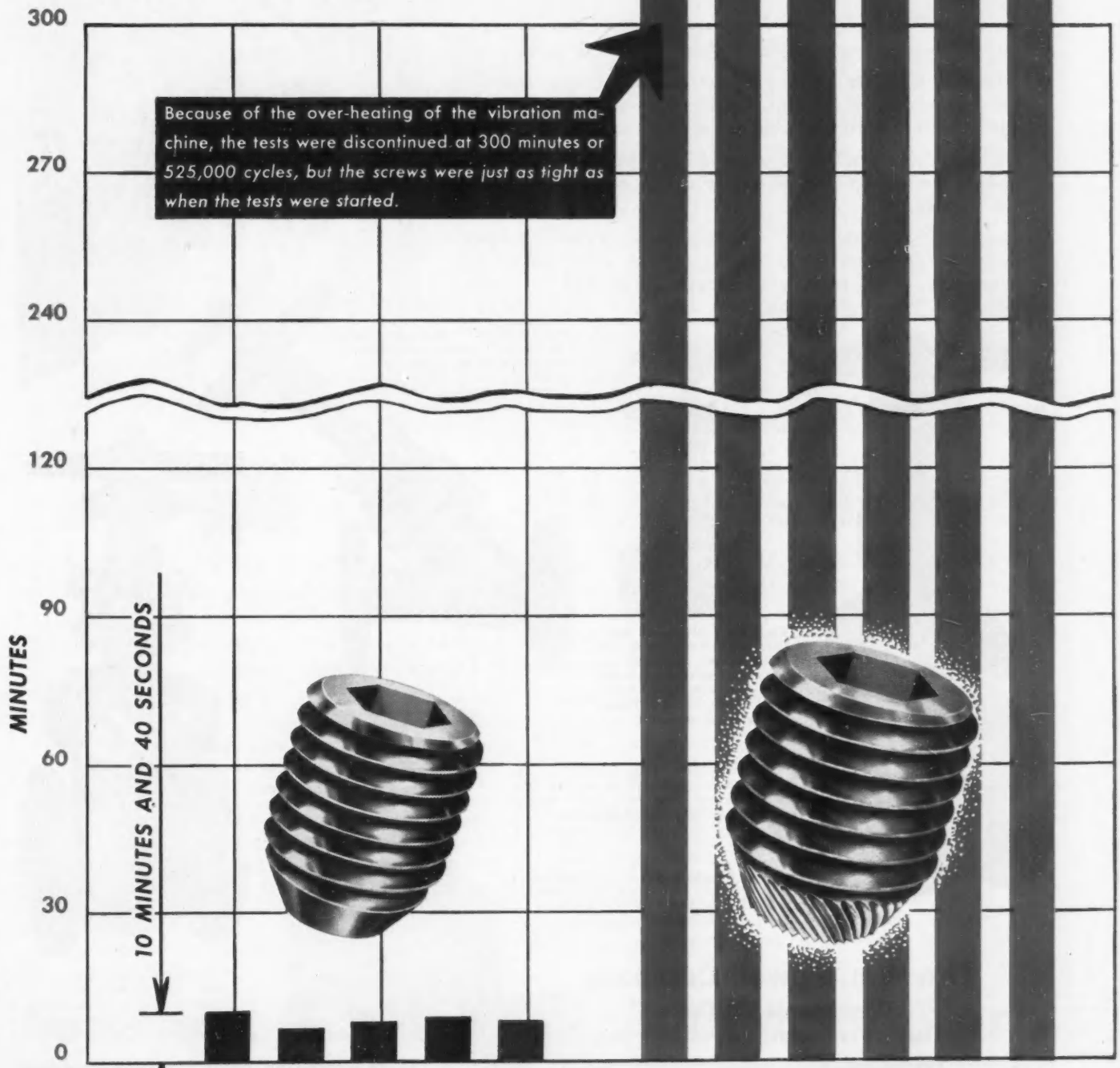
actual tests



POWELL VALVES start their 103rd year of service to Industry

—and the Powell record of satisfactory performance throughout all the past years is your guarantee for the future.

A century is a long time to concentrate on making valves—and nothing but valves. But it's not only important *how long* you've been doing something but also *how well.*

The fact that, in all these years, Powell has never failed to produce the *right* valves to satisfy every industrial need, is real "service."

As we start our 103rd year, there's a Powell Valve of correct design *and material* for every one of your flow control requirements. And, as new conditions bring new demands, there'll be Powell Valves to meet them.

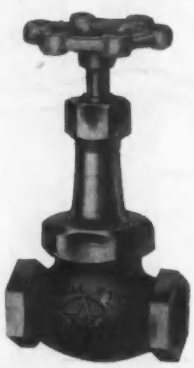


Fig. 1708 — 200-pound Bronze Globe Valve with screwed ends, union bonnet, renewable specially heat treated stainless steel seat and regrindable, renewable wear-resisting "Powellium" nickel-bronze disc.

Fig. 2051 S. W.—150-pound Stainless Steel "Y" Valve with flanged ends, bolted flanged yoke and outside screw rising stem. Equipped with Powell Patented Seat Wiper.

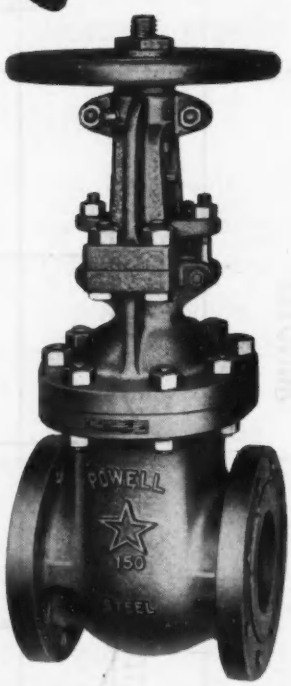


Fig. 1503—Class 150-pound Cast Steel Gate Valve with flanged ends, bolted flanged yoke, outside screw rising stem, tapered solid wedge.

Fig. 1816—Large 125-pound All Iron Gate Valve. Made in sizes 2" to 30", incl. Has outside screw rising stem, bolted flanged yoke and tapered solid wedge. Tapered double wedge can be provided in sizes 2" to 12", incl.

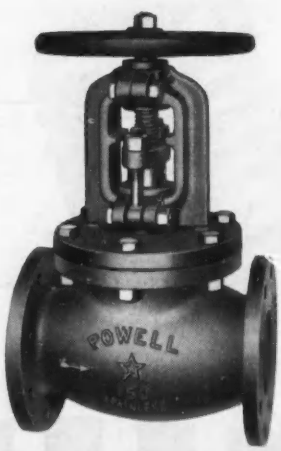


Fig. 2429—150-pound Stainless Steel Globe Valve with flanged ends, bolted flanged yoke and outside screw rising stem.

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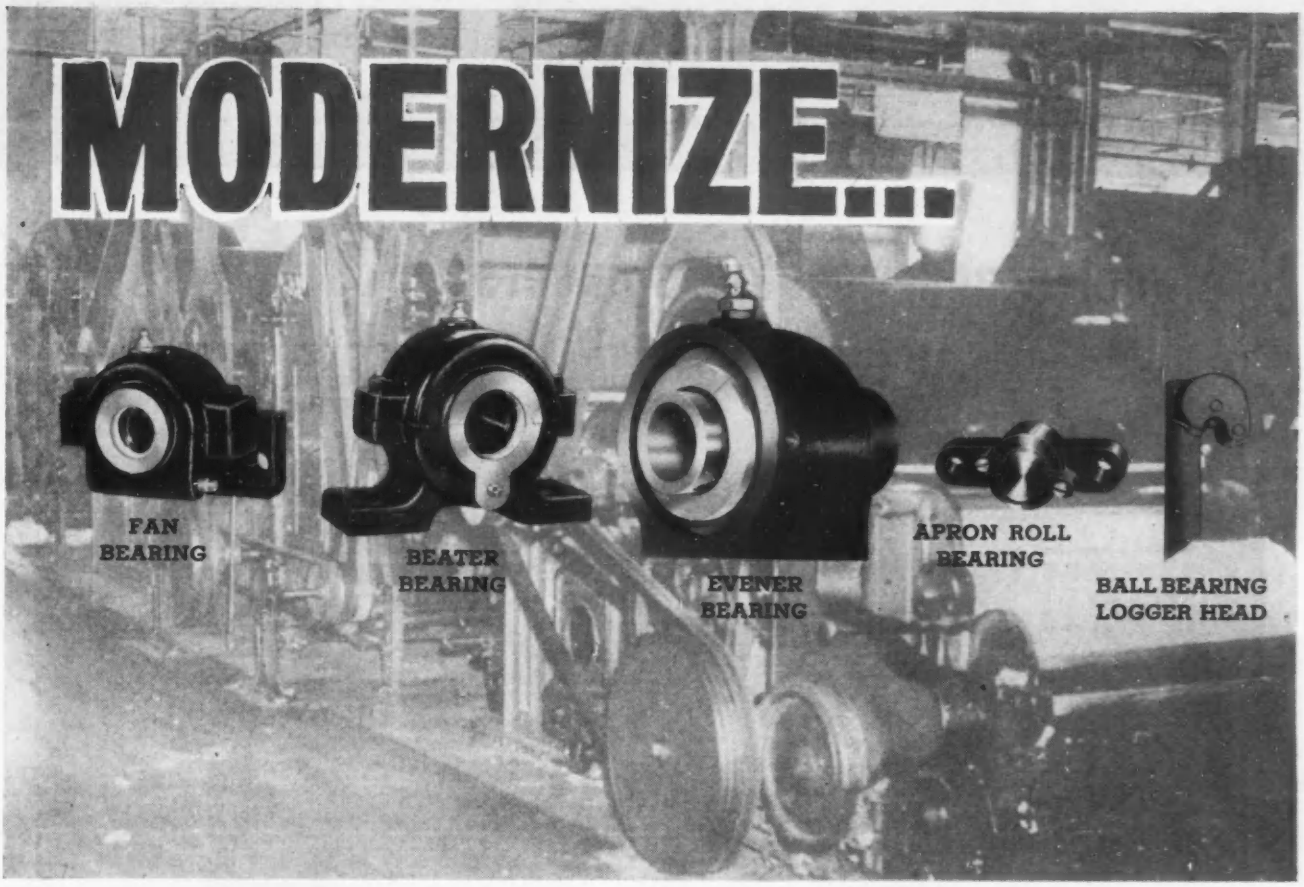
POWELL VALVES



with SS BALL-BEARING PARTS

Modern mills find profits in friction-free machinery. Increase efficiency in your Picker Room — shutdowns reduced to a minimum — maintained uniform production, so necessary to the continuous flow of cotton through your mill. Southern States, a pioneer in ball-bearing equipment for textile mills, has designed for the parts that bear the brunt of the wear, loggerheads, fans, beaters, evener rolls, and apron rolls, free-moving ball-bearings.

LOGGERHEADS. The 1½ ton pressure necessary for tight, even rolls exerted by your loggerheads is a damaging wear on the rods. Ball-bearing shafts reduce this wear by absorbing pressure—provide a free-rolling loggerhead.

BEATERS. Badly worn shafts, time-consuming settings are common to Beaters. Ball-bearing shafts can take this terrific beating with less wear, providing higher and more uniform number of beats per inch. Beaters can now be set to feed roll and screen more accurately, will retain a constant setting longer.

FANS. To deposit cotton evenly across the surface of Picker Screens, fans must move an exact amount of air. Too much air means waste—too little results in poor work. Ball-bearing shafts in your fans assure more even speed—more constant air currents.

EVENER ROLLS, APRON ROLLS. Ball-bearings provide a freer movement to the cones than a solid bearing, in which friction may slow the roll. Evener cones have a more sensitive "feel" — take instant action — when mounted in ball-bearings. For apron rolls, ball-bearings mean less friction and resistance to rotation, operation and replacement.

Southern States SS Equipment Corp.

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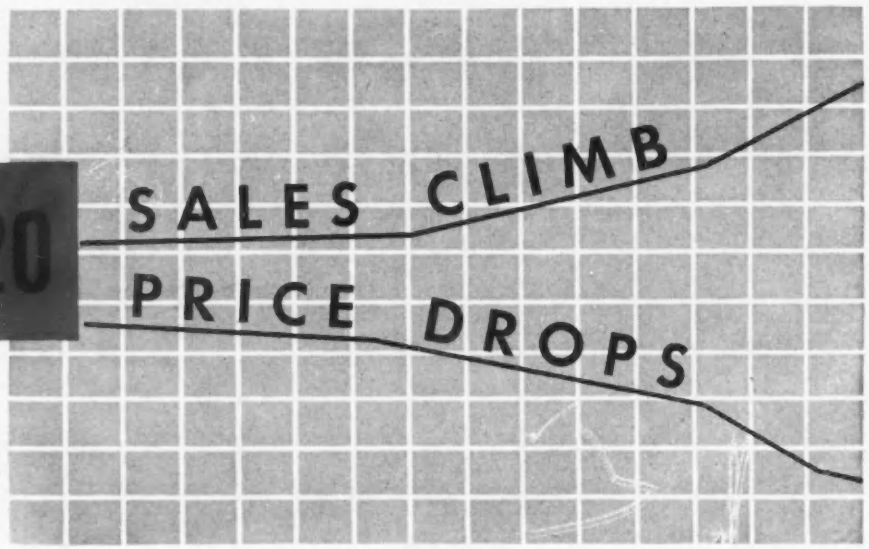
Largest Manufacturer of Cast-Tooth and Cut-Tooth Gears in the South

FOR YOUR INFOR M ATION

To woolen and worsted spinners:

SYTON W-20



Was 20c lb.

***NOW* 15¢* lb.**

**Includes royalties under U.S. Pat. 2,443,512 issued to Monsanto Chemical Company. Full details and license agreements furnished on request.*

As sales of Syton W-20 climb, Monsanto announces a net price reduction of 25% for woolen and worsted spinners.

Every month, more mills have tried Syton W-20 . . . liked it . . . ordered it . . . and reordered it. This growing volume means lower costs . . . savings which Monsanto is promptly passing along.

Reports from more and more mill men tell how Syton W-20 gives them more efficient spinning at lower costs. Proof that you can get the same results *at a new low price.*

ADVANTAGES SYTON DELIVERS

Syton W-20 adds 10% to 30% to the tensile strength of yarns spun on the woolen or worsted system. With increased strength, spinners can reduce twist, thereby get increased production and loftier yarns. Syton W-20 also enables spinners to produce more uniform yarns closer to limit spins than were previously possible. Weavers and spinners report fewer ends down . . . another major Syton W-20 advantage.

Faster and easier to de-size! Monsanto's Stymer for acetate is easily scoured in warm water containing a detergent. No enzymes or strong scouring agents are necessary. And there's a substantial saving in operating time. A typical mill report says Stymer is washed out in only 30 minutes compared to 1 and ½ hours or more for other sizing materials.

Stymer makes another important time saving in slashing. It does not set up in pipes, boxes or tanks. And it eliminates the time-consuming removal at the end of each working period for sizes which gel.

ALL THESE ADVANTAGES GO WITH STYMER

1. **Uniform film, exceptionally strong, abrasion-resistant, smooth and flexible.**
2. **Easily applied in a uniform coating on the individual yarn.**
3. **Adheres well to the fiber.**
4. **Reduces static, because it has high conductivity.**

IN SLASHING, Stymer does not stick to uncovered dry cans, stops static electricity troubles, separates easily at the lease rods and does not gel in the pipes or size box.

IN WEAVING, the warps sized by Stymer show little or no shedding, maintain yarn twist, have fewer end breaks and produce a more uniform fabric.

Stymer is a development of Monsanto research. The Monsanto technicians who helped introduce Stymer are ready to work with you at your own mill.
Just send the coupon for Monsanto's technical bulletin describing sodium Stymer for acetate slashing. Or for assistance with Stymer by Monsanto. Syton, Stymer: Reg. U. S. Pat. Off.

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Please send me information on ☐ *Syton,* ☐ *Stymer. My enclosed letter requests information and assistance with* ☐ *Syton,* ☐ *Stymer at my mill.*

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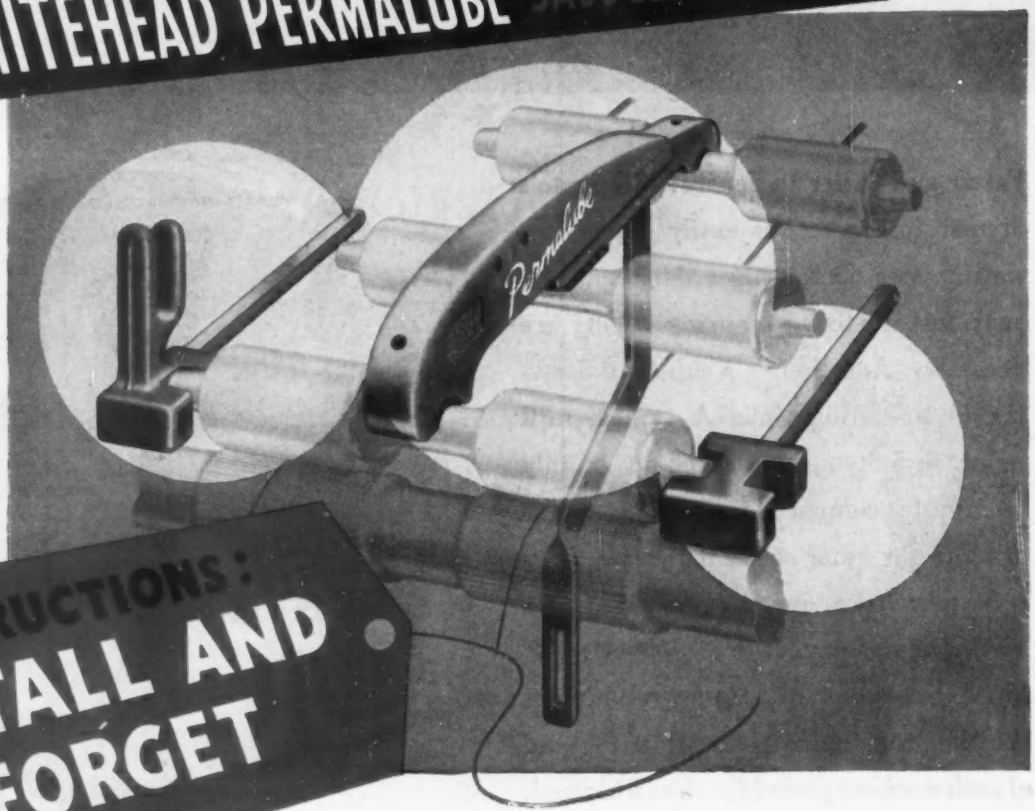
NEW WHITEHEAD PERMALUBE SADDLES AND NEBS



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SADDLES 60c each
Complete with stirrup
NEBS 30c each

INSTRUCTIONS: INSTALL AND FORGET

Here, at last, are Saddles and Cap Bar Nebs that never need oiling, can't gall or score the rolls—Saddles that won't cock or wander, that are easy to clean and will last for years. And yet, with all their superiority, Permalube products cost you less! No wonder so many leading mills are now installing Permalube Saddles and Nebs *exclusively*.

Only WHITEHEAD PERMALUBE Products Offer All These Money-Saving Features

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- Aluminum bearing holders can't score rolls
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- Saddle self-aligning. No tilting
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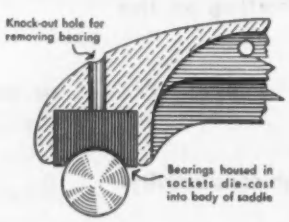

Forty-eight percent of the weight of the Permalube bearing is non-drying oil stored up in thousands of tiny capillaries which feed lubricant to the rolls as needed. Friction and wear are reduced almost to the vanishing point. Repeated tests, equal to years of hard service, show bearing wear of only .002"—less than the thickness of paper!

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...by American Woolen Co.

The famous artist, Ben Stahl, has reproduced, in this painting, one of a new group of basque suits tailored by Rosenblum from coverts and gabardines woven by American Woolen Co.

When mills like American Woolen Co. —just one of many known to everyone— use Sandoz colors for their dyeing, they are confident of obtaining not only the eye appeal desired by the designer but also the long color life demanded by the customer.

For the best possible fastness to light in shades such as the dusty rose of Rosenblum's suit, Sandoz recommends its latest development:

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The mill benefits further from its superlative fastness to mill treatments. And the level dyeing that is characteristic of the Metomega Colors will be welcomed by the dyer who has to make shades like this one on "tippy" new stock.

Have you seen our new movie on Metachrome dyeing — the method that reduces boiling time by as much as 50% compared with top chrome dyeing? Write us for date of next showing near you.

And for any chrome, acid or direct dyes . . . or auxiliary chemicals . . . for both natural and synthetic fibres . . . be guided by the successful "color achievements" you see in these Sandoz advertisements.

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GETTING THE MOST FROM WINDING

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

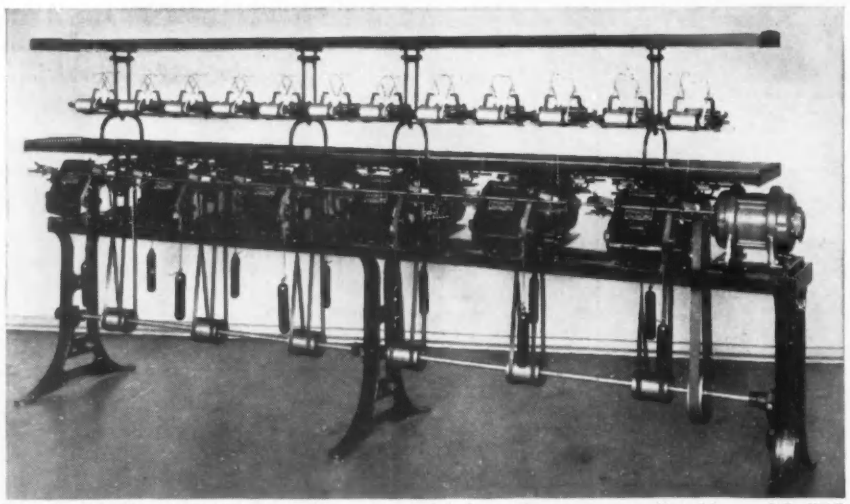

Fig. 1—12 No. 10E Winders for narrow fabric quills, set on rail tables, with "D" unrollers for spool supply. Motor drive. Can be equipped with Disc-Quil or finger tensions.

WINDING NARROW LOOM SHUTTLE QUILLS AND OTHER SMALL PACKAGES (No. 10E Winder)

The No. 10E Universal Winder consists of a single unit having one spindle that runs horizontally through the frame and extends out on both sides.

Single machines can be mounted on a stand or directly on the loom, or can be set in groups on rail tables.

The No. 10E machine can be equipped to wind both natural and synthetic yarns from various supplies such as cones, tubes and spools.

Speeds

The speed of the cam which operates the traversing mechanism should never exceed 200 rpm. Excessive cam speeds, in addition to placing undue strain on moving parts, cause a whipping action of the thread guide which in turn may cause concave ends to be wound on the package.

The speed of the spindle may range from 650 rpm to 1800 rpm, and is determined by the following factors:

number of winds on the package
nature of material being wound
number of ends going into package

Winds

The wind that should be used to produce the best package is governed by the traverse and the kind of material being wound and is best determined by experimentation. In general, one wind should be used for each half-inch of traverse.

By increasing the number of winds in relation to the traverse length, it is possible to obtain higher spindle speeds without exceeding the safe maximum cam speed. (Increasing the number of winds for any given traverse length and spindle speed decreases the cam speed—wind being the ratio of the cam shaft speed to the spindle speed.) However, in no case should the cam speed exceed 200 rpm.

Various materials make it necessary to deviate from the standard number of winds in relation to the traverse length as described above. If the number of winds is increased to any great extent, the yarn may become incorrectly spaced in the knuckles, causing it to pile at this point and form bulging ends on the package.

Quite often this condition can be relieved by changing the lay of the yarn. This adjustment is made by opening or closing the expanding gainer pulley.

Ends

Multiple-end winding requires a slower speed than that which may be used when winding a single end of yarn. This is so that the stopping mechanism may work quickly enough to prevent broken ends from running in, which would cause excessive waste and loss of production.

Tapers

The 10E machine winds both straight and taper-end packages. For the latter, a special attachment is used, having an adjustable taper bar which may be set to produce various degrees of taper. As the package increases in size, the thread guide holder moves away from the spindle, and its traverse, which is restricted by a taper bar connecting rod, gradually diminishes. Consequently a taper is formed at each end of the package.

See pages on Universal and Atwood Machinery in TEXTILE CATALOGS AND DAVISON'S

*Reg. U.S. Pat. Off.

January 1949

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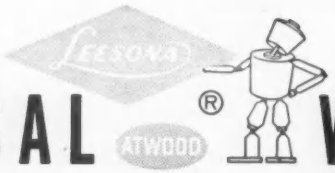

WINDING AND TWISTING MACHINERY FOR NATURAL AND SYNTHETIC YARNS

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INCLUDING ATWOOD DIVISION

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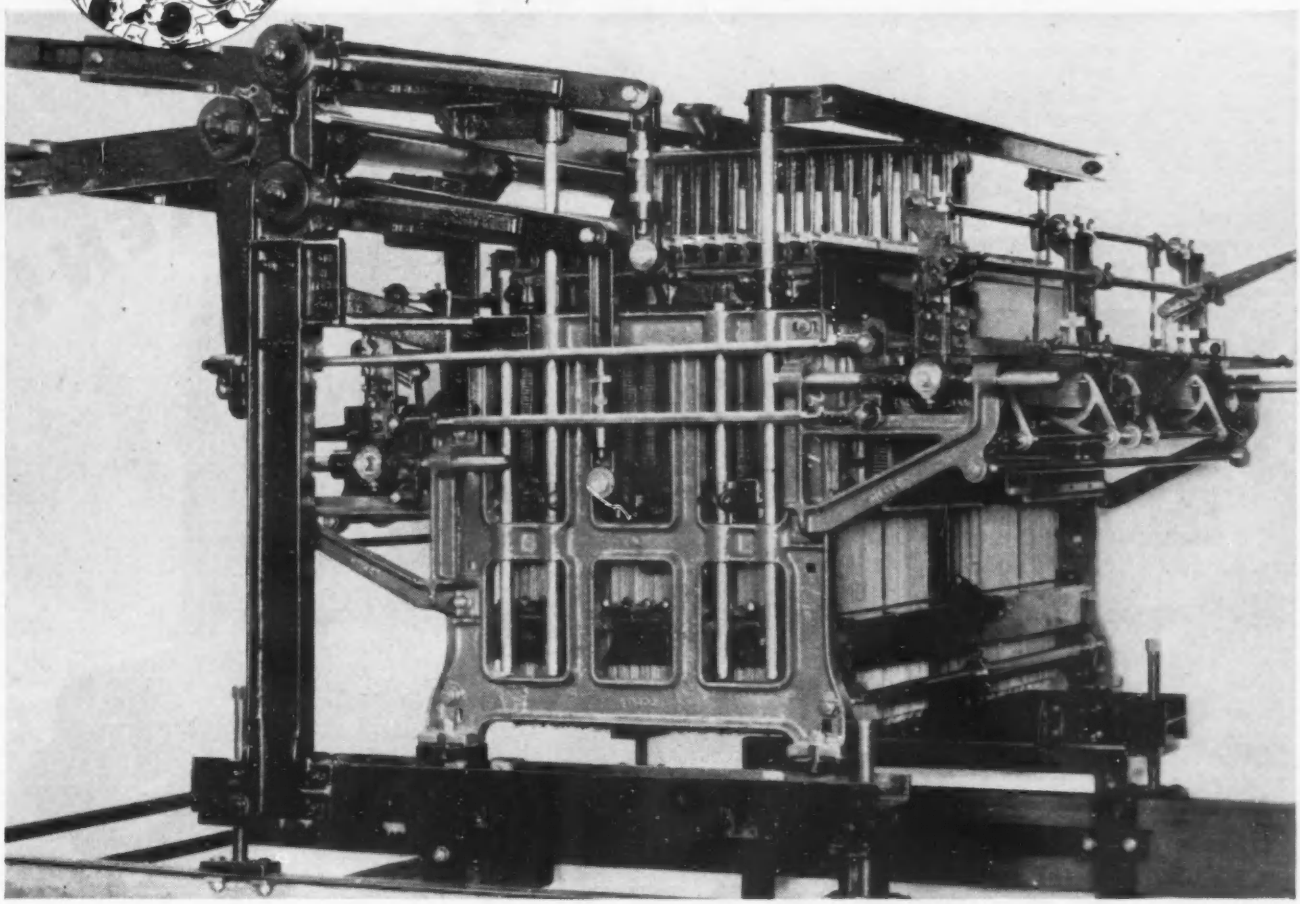
New Markets FOR MERCHANDISERS!



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This is the *only* 2608-hook, double-cylinder jacquard. With its independent cylinder drive, it will extend the scope and speed of any loom now equipped with a single-cylinder jacquard to the point where initial cost will be repaid in a matter of months. Ask your jacquard men to look into this—and all other—new C&K developments. There's a new illustrated publication, giving full mechanical details, which they—or you—may have for the asking. Write today.

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Dodge-Timken Bearings are supplied promptly from stock in four basic types and a wide range of sizes to meet an almost limitless variety of anti-friction problems.

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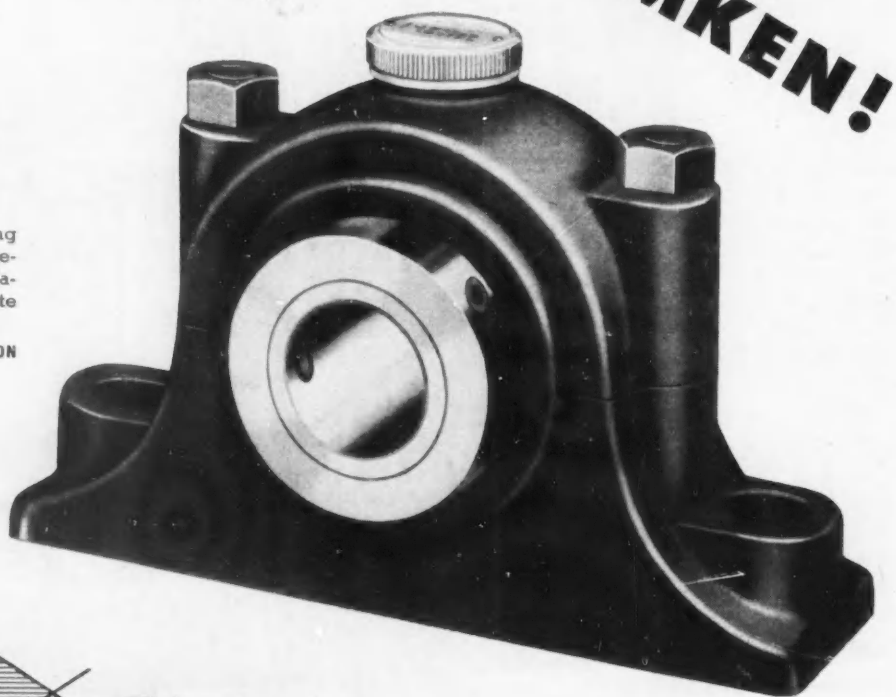

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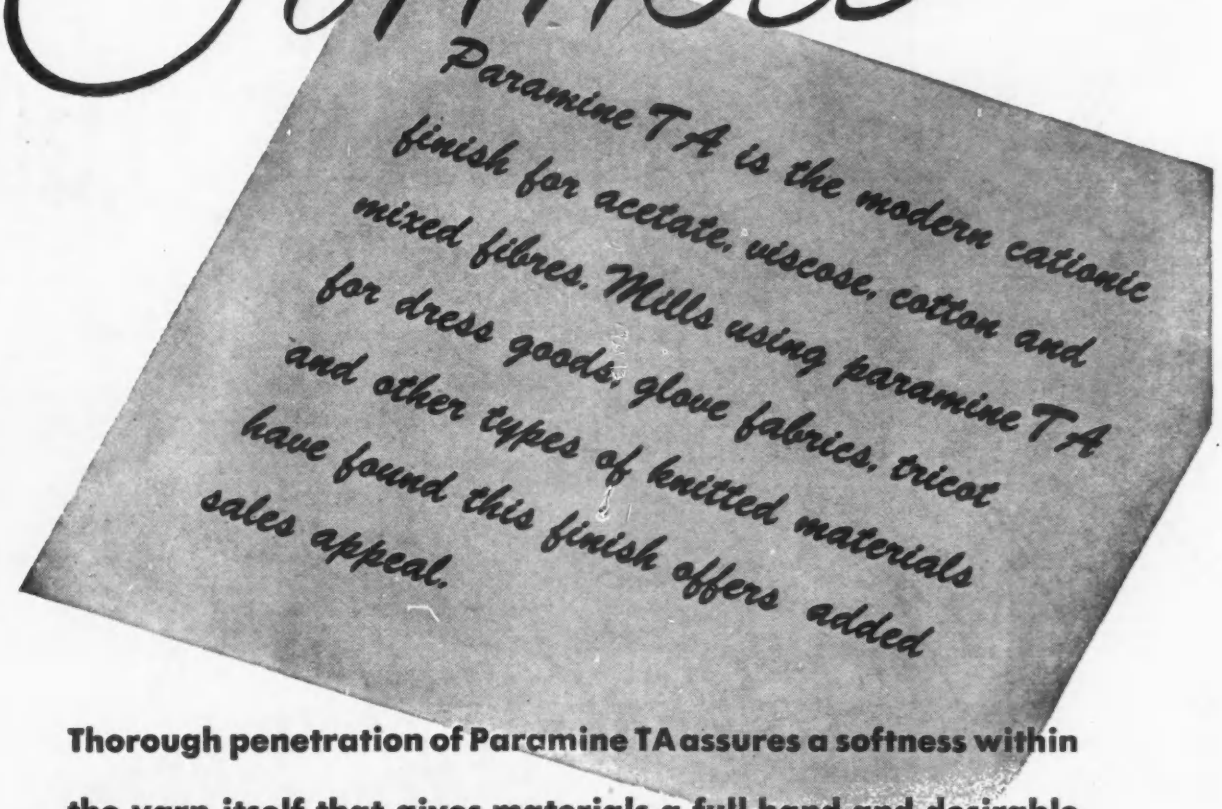
DURABLE *Softness*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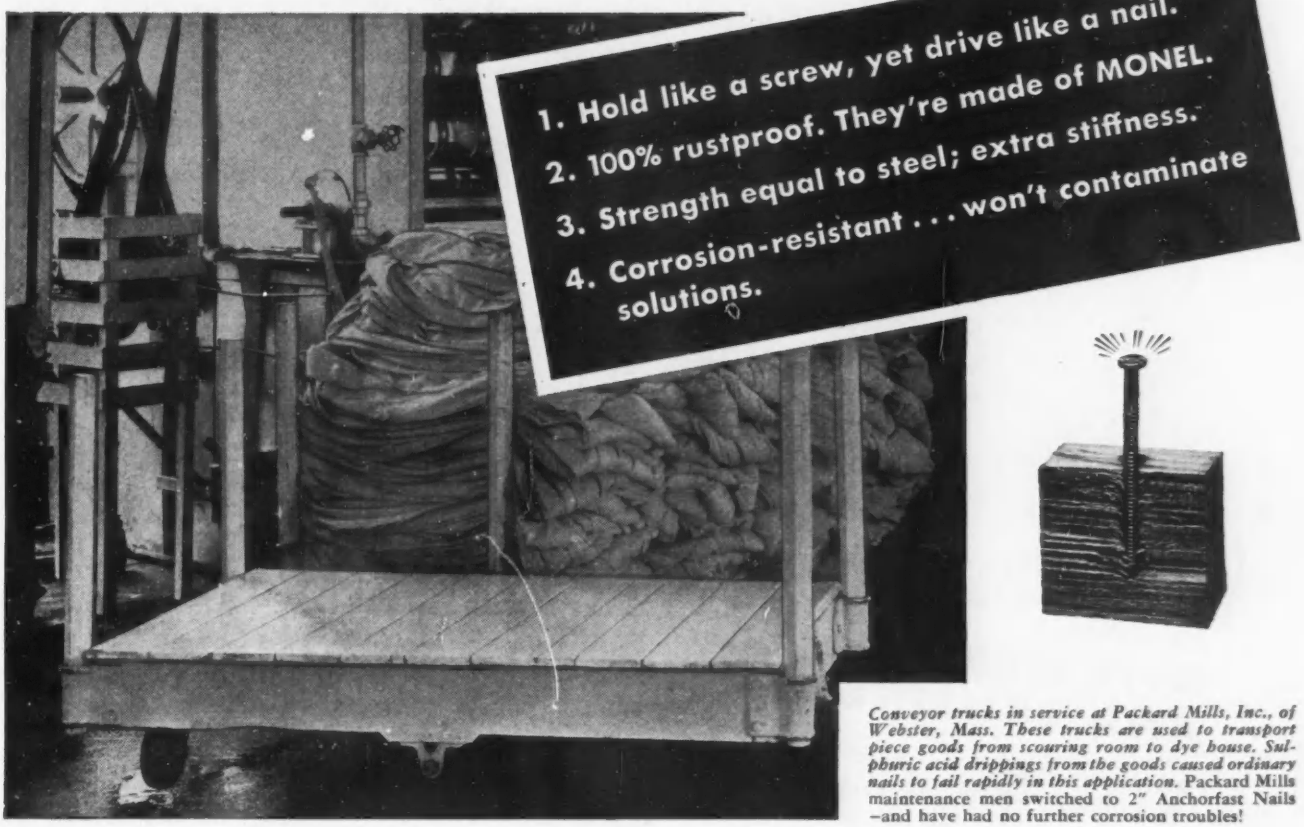
1. Hold like a screw, yet drive like a nail.
2. 100% rustproof. They're made of MONEL.
3. Strength equal to steel; extra stiffness.
4. Corrosion-resistant . . . won't contaminate solutions.

Conveyor trucks in service at Packard Mills, Inc., of Webster, Mass. These trucks are used to transport piece goods from scouring room to dye house. Sulphuric acid drippings from the goods caused ordinary nails to fail rapidly in this application. Packard Mills maintenance men switched to 2" Anchorfast Nails —and have had no further corrosion troubles!

With *Anchorfast*† *Nails,* you get the holding power of a screw at the cost of a nail. You may eliminate hole-drilling and setting compounds. AND you get outstanding protection from rust and corrosion.

These are the features that make *Anchorfast Nails* favored fastenings among textile processors.

Because they're made of rustproof, corrosion-resistant MONEL*, *Anchorfast Nails can't* rust or harmfully contaminate solutions.

Their extra stiffness means less spoilage under the hammer. Still another valuable feature . . . the special annular grooves around the shank of *Anchorfast Nails* prevent "pulling out" caused by alternate swelling and shrinking of the wood. This makes it possible to use *Anchorfasts* in conditions of sharply varying humidity where ordinary nails would fail.

Leading fabric processing plants use *Anchorfast Nails* as fastenings for vats, tubs, ducts, floors, ceilings, conveyor trucks — wherever adverse conditions of stress, humidity, and chemical corrosion must be defeated.

Anchorfast Nails may be the answer to many of *your* fastening problems, too. Why not investigate their unusual advantages today? Write for FREE testing device and list of distributors.

*Reg. U.S. Pat. Off. International Nickel Co.
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For, with such a large number of units doing a cooling, heating or condensing job in practically every type of industry, Ross was able to make thoroughly conclusive observations. A definite trend became apparent in the selection of individual assemblies from standardized "BCF" parts. Thirteen sizes and sets of dimensions clearly established themselves as the needs of the majority, as did certain refinements in construction and advancements in thermal engineering gained through practical observations in the field.

Thus, with the will of the majority expressed, these most-wanted features have become standardized in the *new "BCF" All-Nonferrous Exchanger, now mass-produced for low unit cost, and continually stocked at the Ross plant for prompt shipment.*

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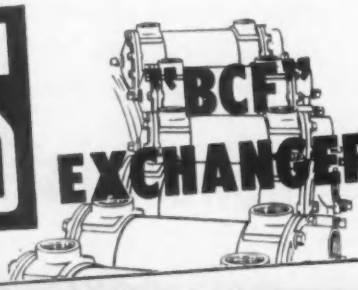
Eight pages illustrate and summarize your benefits from the new "BCF". Ask for Bulletin 1.1K1 on your letterhead.

ROSS "BCF" EXCHANGERS



Ross Heater & Mfg. Co., Inc.
Division of American Radiator & Standard Sanitary Corporation
1461 WEST AVE. BUFFALO 13, N. Y.

In Canada, Horton Steel Works, Ltd., Fort Erie, Ont.

Serving home and industry
AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILER • ROSS HEATER • TONAWANDA IRON

ABBOTT Automatic WINDERS

Cut Winding Costs to the Bone!

How? Because one seated operator can run as many as 200 spindles with an hourly production of 800 to 900 bobbins tied in, throughout every week, at winding speeds up to 800 yards per minute! The operator's only task is putting full bobbins in a rotating magazine and doffing full packages.

In the face of ever-increasing production costs, wise management will investigate the labor-saving, cost-cutting Abbott Automatic Winder. Write for bulletin.

ABBOTT MACHINE COMPANY
FACTORY AND MAIN OFFICE:
WILTON, NEW HAMPSHIRE
SOUTHERN OFFICE: GREENVILLE, SOUTH CAROLINA

FAST, COMPLETE, UNIFORM FIBRE PENETRATION

THOROUGH DIRT REMOVAL

FAST, THOROUGH RINSING

Olate

A SOFT, PLEASING HAND

MINIMUM STICKINESS OR TACKINESS

"STARS" IN FULLING AND SCOURING!

You'll probably never find a soap that can top Olate's performance in woolen or worsted fulling and scouring. In Olate's purity, low titer, and thin flake form, there's a combination of qualities made to order for handling these important operations efficiently, safely and economically.

Try Olate. Its reputation for turning out saleable fabrics is based upon many years of successful use in countless American textile mills.

PROCTER & GAMBLE

Olate –

safe and efficient for every textile soap usage!

MANUFACTURERS—
DISTRIBUTORS—
SELLING AGENTS—

ATTENTION!

Financing production and distribution with maximum efficiency, and at a minimum of risk, is best accomplished through the financial and credit checking services of a strong factoring organization.

Increased sales volume without increased fixed invested capital, accelerates turnover and should yield greater profits.

Write today for details.

John P. Maguire & Company
INCORPORATED

FACTORS

370 FOURTH AVENUE • NEW YORK 10, N. Y.

Check Credits • Cash Sales • Absorb Credit Losses

cactus thrives without humidity but . . .

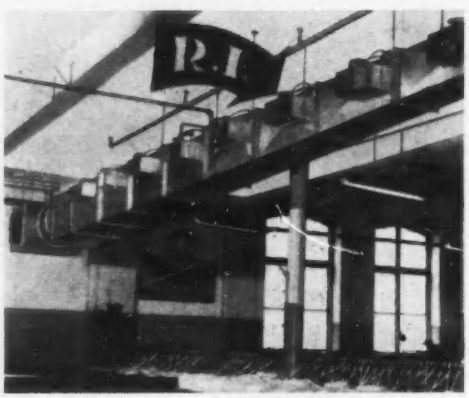
TEXTILE PROFITS PERISH

Production can be stepped up by correct humidity and lower temperatures. Textile mills equipped with RIHCO systems maintain this correct humidity in which fibres will run more smoothly while room temperatures can be reduced to the right degree for labor efficiency and comfort. The RIHCO principle of humidification and evaporative cooling permits the use of smaller air compressor units, thus reducing installation and power costs. No matter what your textile process may be, you'll find it profitable to consult with a RIHCO engineer. Why not write us today?

R.I. HUMIDIFIER & VENTILATING CO.

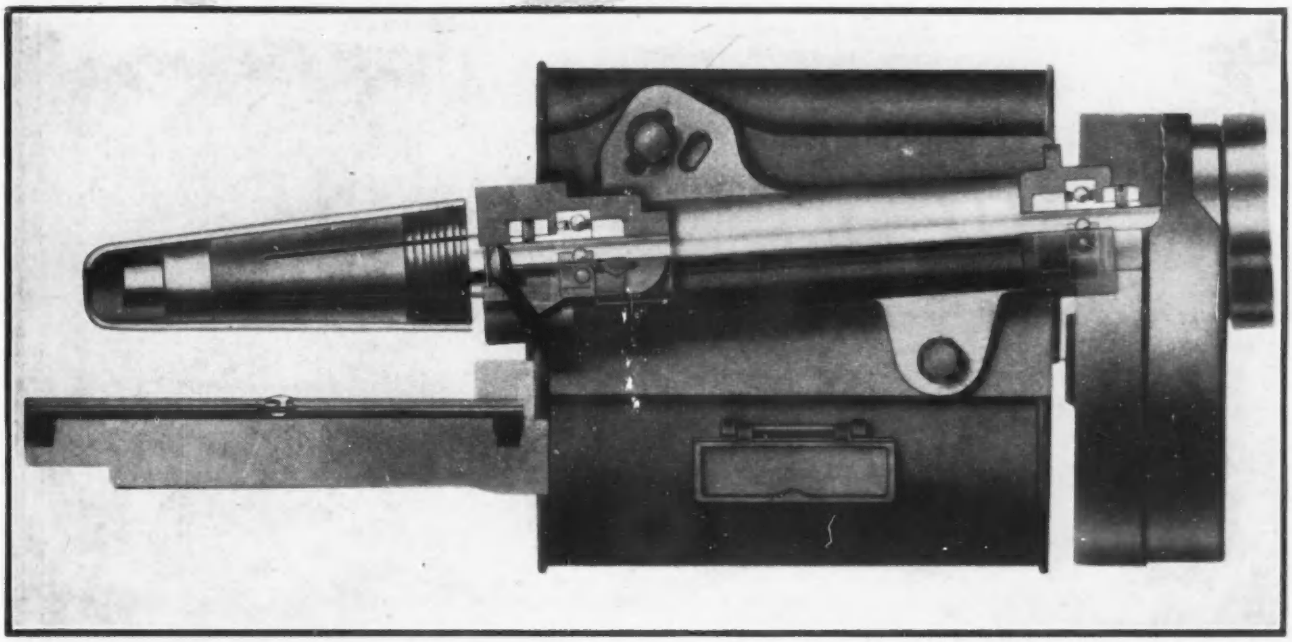
Established in 1912

99 CHAUNCY ST. BOSTON 11, MASS.
1043 COMMERCIAL TRUST BLDG. PHILADELPHIA 2, PA.
P. O. BOX 750 ATLANTA 1, GA.
R. I. HUMIDIFIER & VENTILATING CO. OF CANADA LTD.
980 ST. ANTOINE ST. MONTREAL, 3, CANADA



Clean air is circulated through these ducts. Over each outlet a RIHCO Atomizer moistens and cools the escaping air. This patented RIHCO Atomizer internally mixes a separate air supply with a fine jet of water. This mixture emerges to normal atmospheric pressure with an explosive expansion that completely vaporizes the water. Evaporation lowers the temperature. Predetermined quantities of outside air are introduced as required to maintain a uniform blanket of cool, moist air over the entire room. Automatic controls hold both humidity and temperature reasonably and economically constant.

LESS HORSEPOWER— LESS SPINDLE REPLACEMENT

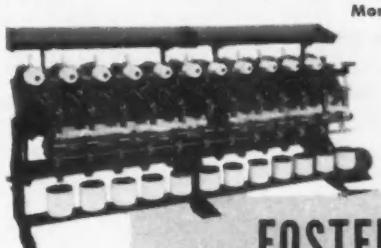


More for Your Money with FOSTER MODEL 75

THE FOSTER MODEL 75 is equipped with ball bearing spindles that effectively reduce power consumption so that a 30 spindle machine requires only one 2 h.p. motor. In addition, the ball bearing spindle improves the mechanical performance of the winder, protects the yarn from oil spots, and operates indefinitely without replacement. These characteristics add up to more for your money with Foster Model 75.

OTHER IMPORTANT FEATURES OF THE MODEL 75 ARE AS FOLLOWS:

1. Winds standard Foster convex base cones, or, with special added attachment, pineapple cones.
2. When equipped to wind pineapple cones the starting traverse may be varied between 4" and 6".
3. Depending on type of yarn and other conditions, cone density may also be varied between 40 and 70 by Durometer reading.
4. A slow starting device prevents yarn strain.
5. Total enclosure of lubricated parts prevents yarn soilage.



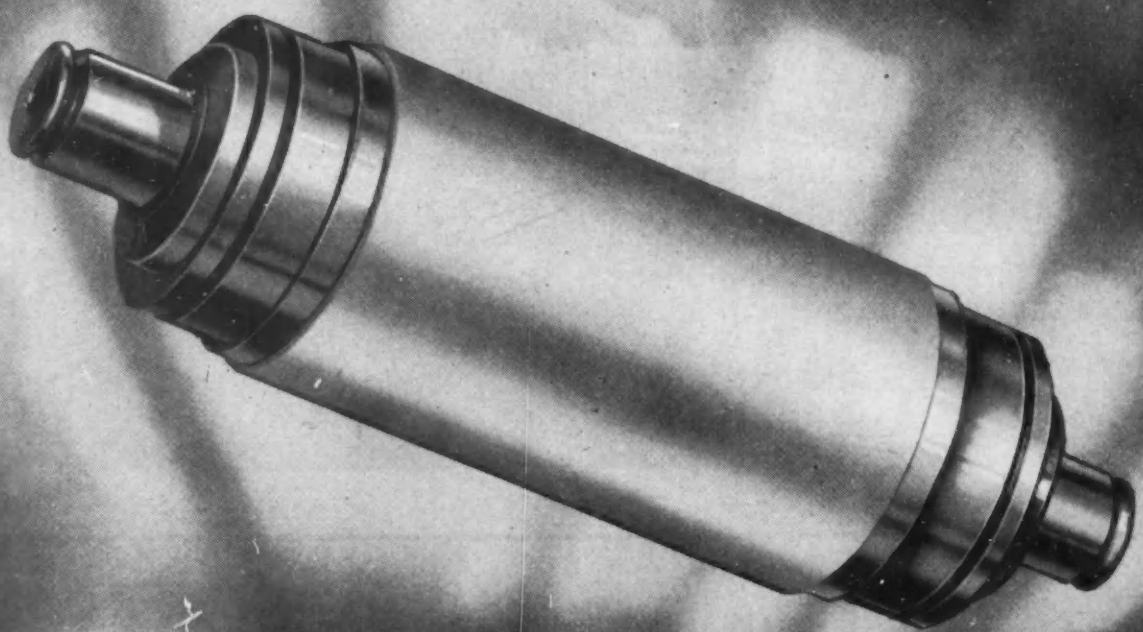
FOSTER MACHINE CO.
WESTFIELD, MASSACHUSETTS
Southern Office — Johnston Bldg., Charlotte, N. C.
Canadian Representative — Ross Whitehead & Co., Ltd., University Tower Bldg., 660 Ste. Catherine St., West, Montreal, Quebec
European Rep.—Muschamp Taylor Limited, Manchester, England

BULLETIN A-92-A ON REQUEST

FOSTER MODEL 75

For Winding Nylon, Rayon, Silk and Cotton Thread Yarns

PERKINS



Perkins Calender Rolls—the natural result of the longest and broadest experience in the industry give a quality that is definitely reflected in your product. Perkins service includes refills of any make of calender rolls.

B. F. PERKINS & SON, Inc.

ENGINEERS AND MANUFACTURERS

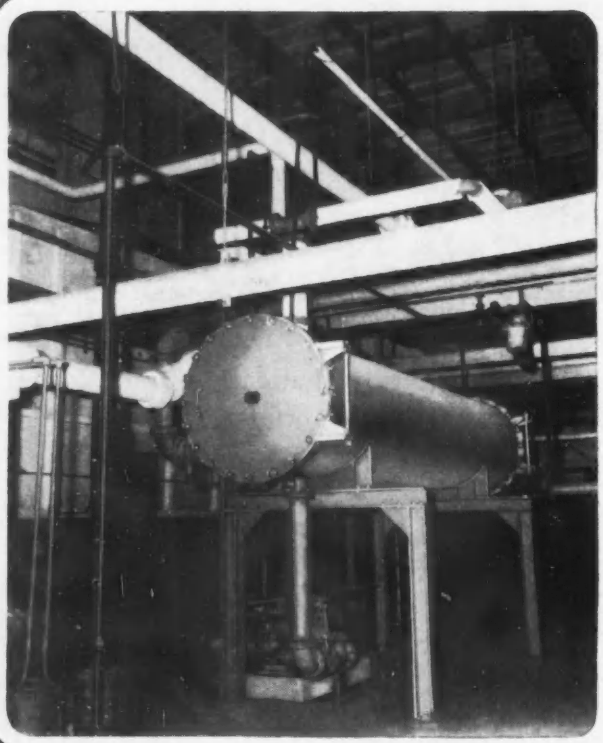
HOLYOKE, MASS.

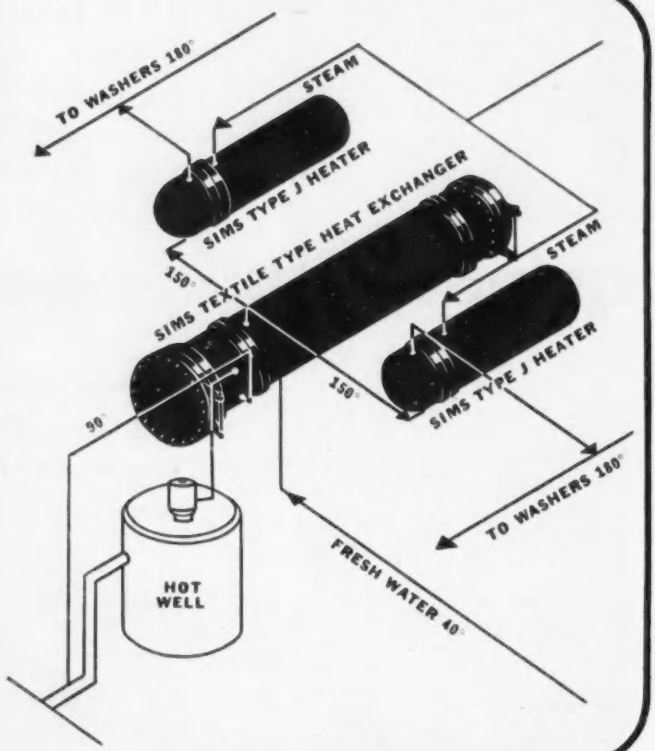
LARGEST MANUFACTURERS OF CALENDER ROLLS IN THE WORLD

After sixty years of service to the textile industry of the South, Standard Oil lubricants are still *first* in popularity. This *continued* popularity is due to the fact that through the years they have continued to demonstrate that they are first in *performance*. Quantity sales are relatively easy of products of proved quality. The combined facilities for testing and research behind Standard Oil lubricants are unequalled. They are being constantly improved, through research and careful attention to the changing needs of the textile industry. Whatever your lubrication needs, you'll find it profitable to consult with a Standard Oil representative *first* regarding your requirements.

quality builds quantity

STANDARD OIL COMPANY INCORPORATED IN KENTUCKY





Georgia Textile Plant orders another SIMS HEAT RECOVERY SYSTEM

TAKE time to stop profit leaks in your plant—one of the largest is found in the hot linty sewer waste water. SIMS of Erie has repeatedly proven to Textile plant operators, thru guaranteed savings, that recovered B.t.u.'s mean extra boiler horsepower. Give a SIMS Heat Recovery System your present hot sewer waste—it will deliver 180° fresh water to your washers fueled by recovered heat units. Whether your operations are large or small, if your sewer waste is 120° or over, SIMS of Erie has a real profit service to offer you at no obligation.

• IF YOUR SEWER WASTE *is over* **120° F.**
Consult **SIMS OF ERIE**

THE SIMS COMPANY • ERIE, PA.

Manufacturers of Exhaust Gas Boilers • Heat Exchangers • Storage Water Heaters • Feed Water Heaters Steam Separators • Commercial Type Instantaneous Water Heaters • Oil Heaters • Quenching Oil Coolers Caustic Soda (Sodium Hydroxide NaOH) Recovery Equipment and Unit Type Coal Pulverizers

TEXTILE BANKING COMPANY

Inc.

Factoring Service

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

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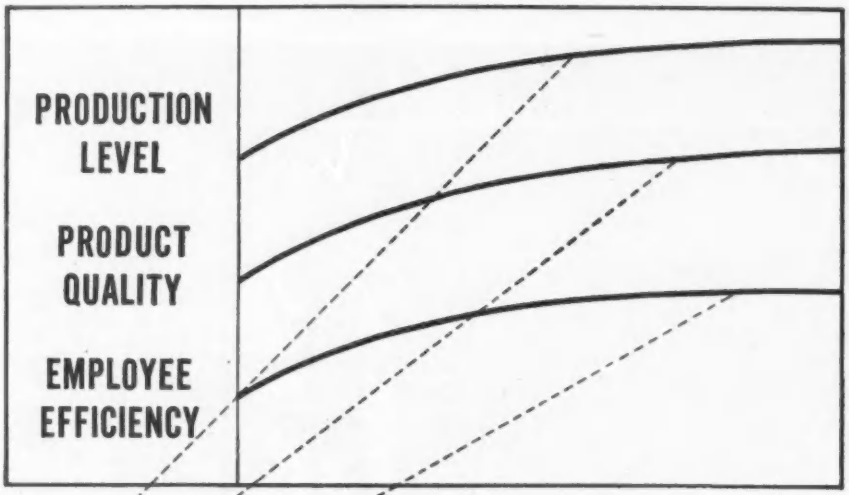


THE INVISIBLE SECURITY OF AIR CONDITIONING GIVES YOU RESULTS YOU CAN SEE

Absolute temperature and humidity control in your plant will give you results you can *see—in high level production . . . uniform quality of products . . . and improved employee efficiency.*

Every year more and more mills are recognizing the downright economic necessity of air conditioning . . . are depending on York for installations which assure them year 'round operation at a minimum of expense and attention.

Regardless of the size of the mill or the special problems involved, there's a complete range of York equipment to meet every specification. Since 1885, York has been the foremost name in mechanical cooling, and York central station installations are in operation in many of the country's largest and most modern textile plants.

And, whatever your specific needs in air conditioning, there's a complete range of York equipment to meet them, and a York representative ready to talk textile installations. He is prepared to supply your plant engineer, consulting engineer and installing contractor with specific information as to equipment—its capacities and performance to fit your special needs. His accumulated data on air conditioning in your particular field will be helpful. York Corporation, York, Pennsylvania.

YORK *Refrigeration and Air Conditioning*

HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885

CALCO dyelines

PUBLISHED BY *AMERICAN Cyanamid COMPANY* / CALCO CHEMICAL DIVISION
Bound Brook, New Jersey
New York • Chicago • Boston • Philadelphia • Charlotte • Providence

CALCO NOW PRODUCES FASTEST VAT YELLOW FOR DYEING OR PRINTING

Available in powder or paste form for dyeing, Calco's new vat yellow has the best over-all fastness properties of any vat yellow obtainable at present. Belonging to the anthraquinone class, Calcosol* Fast Yellow Paste produces a clear, bright true yellow which withstands long exposure to light—even in very pale shades. Its fastness to light, chlorine, towel bleach and washing recommend it for coloring towels, draperies, sheets and similar applications. It is also available as the dispersed powder under the name of Calcoloid Fast Yellow Double Powder.

Calcosol Fast Yellow Printing Paste gives performance under the Fadeometer equal to that of the dyeing type. In medium and heavy shades it will stand 150 or more Fadeometer hours without color loss. Its fastness to washing, chlorine, crocking, dry cleaning, perspiration, water spotting and collafuse is excellent. It gives exceptional results in Plissé printing; and it is highly recommended for drapery printing and other applications where a fast vat yellow is important. On viscose rayon or cotton it produces rich shades; and it is a good fast yellow element when used in combinations.

*Trade-mark

New Soluble Vat Dye Calco Soluble Vat Brown RR

Calco Soluble Vat Brown RR has just been announced, and it is the soluble vat dye form of Calcoloid Brown RRP Paste. It can be applied by the usual plant procedure for Soluble Vat dyes and is suitable for roller printing, screen printing, cotton dyeing and wool dyeing.

With Calco Soluble Vat Brown, prints and dyeings are produced having fastness properties comparable to the corresponding vat dye. It is recommended for the production of a range of brown shades when used either by itself or with other soluble vat dyes as shading elements.

Calco Soluble Vat Brown augments the present Calco Soluble Vat Dye line for the production of a much wider range of shades.

Dullness or Brightness in a Single Dye

It is usually easy to dull down a bright dye to obtain a duller shade during dyeing operations, if the flatter shade is required. However, every dyer knows that if his available dyes are already dull, it is generally impossible to get that extra brightness without adding an extra dye at the expense of some of the desired fastness properties in the final result.

Calcocid Alizarine Blue SAPG and Calcocid Alizarine Blue SE are exceptionally clear, bright types of Acid Alizarine Blues. They are versatile colorants since they can be dulled in the mill where necessary—*and when you want extra brightness—they have it!*

Request samples of these Calcocid Alizarine Blues from your Calco representative, and compare them today.

FOR THE TEXTILE BOOKSHELF

Calco Technical Bulletin No. 807—"Dyeing Studies at Elevated Temperatures" by G. L. Royer and C. L. Zimmerman, Calco Research Department, and H. J. Walter and R. D. Robinson, Bachmann Uxbridge Worsted Corporation, Uxbridge, Mass.

Following the concept of continuous dyeing at high temperatures under pressure by H. J. Walter, president of Bachmann Uxbridge Worsted Corporation, the Research Department of the Calco Chemical Division, American Cyanamid Company, began, in 1941, a cooperative investigation with the Bachmann Uxbridge Worsted Corporation on a fundamental study of the dyeing of wool and wool-cotton unions at high temperatures under pressure. This bulletin reports methods developed for dyeing textile fibers at temperatures in the range of 200° F. to 300° F.

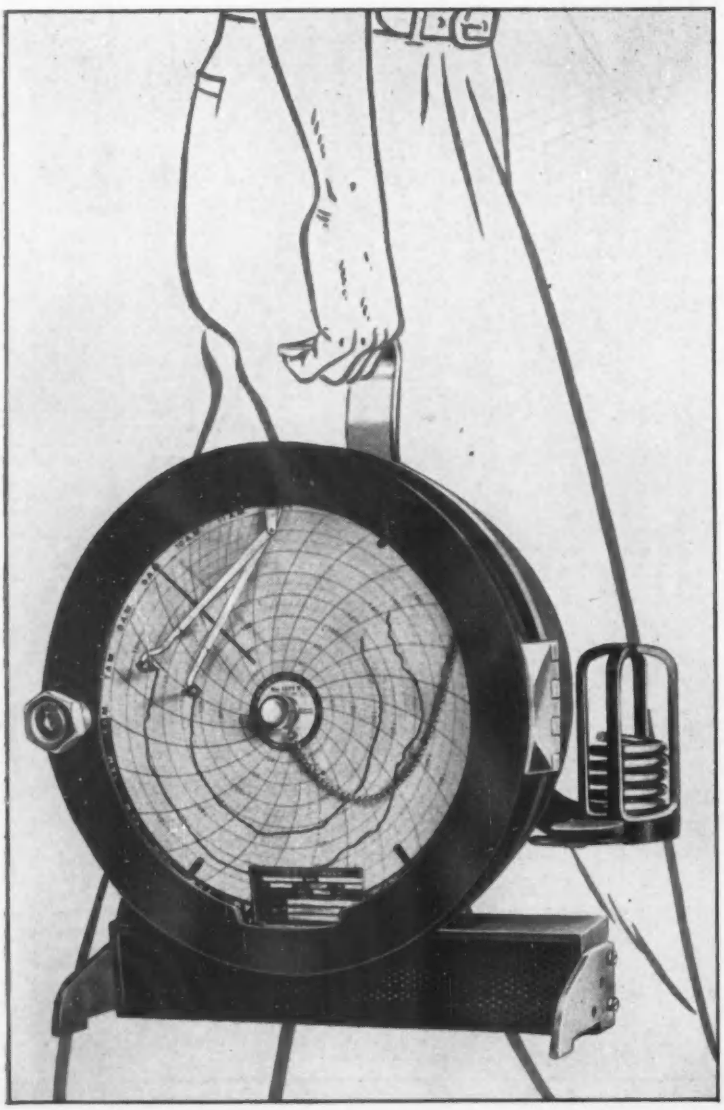
The high temperature technique increases the speed of dyeing to such an extent that dyeing, which normally requires hours, can be produced in a matter of seconds. This increased speed of dyeing makes it practical to dye continuously at a rapid rate many fibers which previously have not been dyed by a rapid continuous process.

250 tons of ice can be produced daily in Calco's ice plants

IT'S EASY TO CHECK TEMPERATURE and HUMIDITY

Anywhere... Anytime

WITH THIS LOW-COST PORTABLE RECORDER



THE Brown Temperature-Humidity Recorder is compact, light-weight, portable . . . just about the handiest instrument you ever used. Hang it on the wall to get a record on either a twenty-four hour or seven-day chart, then pick it up and take it with you to make a check in another location!

Both measuring elements are over-sized for extra sensitivity, and are located outside the case for full contact with room atmosphere. Door may be locked to prevent unauthorized access to records . . . green pen records temperature . . . purple pen records percent of relative humidity . . . 8″ diameter chart has a range of 0–100° F. and 0–100%, is easy to read.

Mail your order today . . . keep a check on your air temperature and humidity.

SPECIFY WHEN ORDERING

1. Model Number. (See table below).
2. Chart No. 1565 for 24-hour revolution; or No. 1571 for 7-day revolution.

MODEL NUMBER	DESCRIPTION	PRICE
A 6882-601	Portable Thermometer-Hygrometer (as illustrated)	$133.00
A 6881-X01	Hygrometer only	$100.00
A 6081-X01	Thermometer only	$100.00

NOTE: Above prices are for 24-hour revolution clock. Where 7-day revolution is desired, specify Chart No. 1571 and add $6.00.

MINNEAPOLIS-HONEYWELL REGULATOR CO.
BROWN INSTRUMENTS DIVISION
4492 Wayne Avenue, Philadelphia 44, Pa.

Offices in principal cities of the U. S., Canada and throughout the world

BROWN *Advanced Instrumentation* FOR THE TEXTILE INDUSTRY

Product of MINNEAPOLIS Honeywell

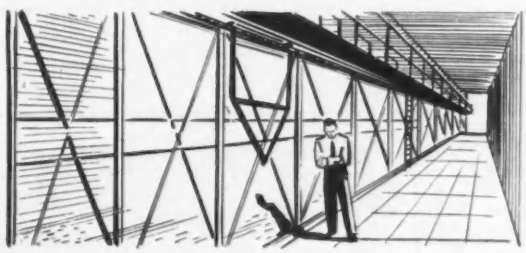
TO SERVE YOU BETTER

US IS

BUILDING . . .

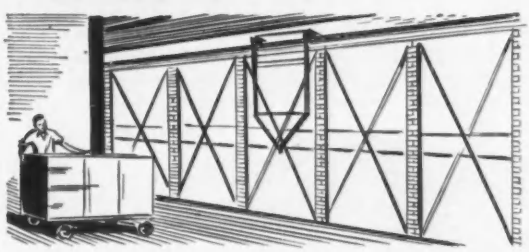
Our recent purchase of additional forest tracts in the Adirondacks gives us the largest reserves of virgin hardwood timber in our history. To process this premium grade stock at its source, we have completed a great new plant at Tupper Lake, N. Y. —with multiple splitter and saw capacity plus precision seasoning equipment and ample storage for shipment as needed. *To serve you better—superior materials—in ample supply—for present and future needs.*

BUILDING . . .



At our Lawrence plant, an additional battery of eleven big-capacity kilns is ready for action. No expense has been spared to make these new facilities the most modern in use anywhere—with automatic, instrument controls plus improved design to speed loading and unloading. This assures that every U S item you order has all the advantages of *modern manufacture plus large volume output to speed deliveries.*

BUILDING . . .



Improved equipment has recently been installed in our enameling department—one of many improvements in processing to turn out better quality at a faster rate. Here again is an example of the U S policy to manufacture the finest products—provide the best of service—and to make deliveries in the shortest possible time after an order is received.

Consult a U S Representative regarding your requirements in spools, bobbins, shuttles, cones, rolls and other U S products. He's a practical millman, familiar with textile processes and able to offer experienced advice to help you make your choice.

US BOBBIN & SHUTTLE CO.

PROVIDENCE, R. I.
GREENVILLE, S. C.

LAWRENCE, MASS.

JOHNSON CITY, TENN.
CHARLOTTE, N. C.

CHICAGO REPRESENTATIVE:
Albert R. Breen
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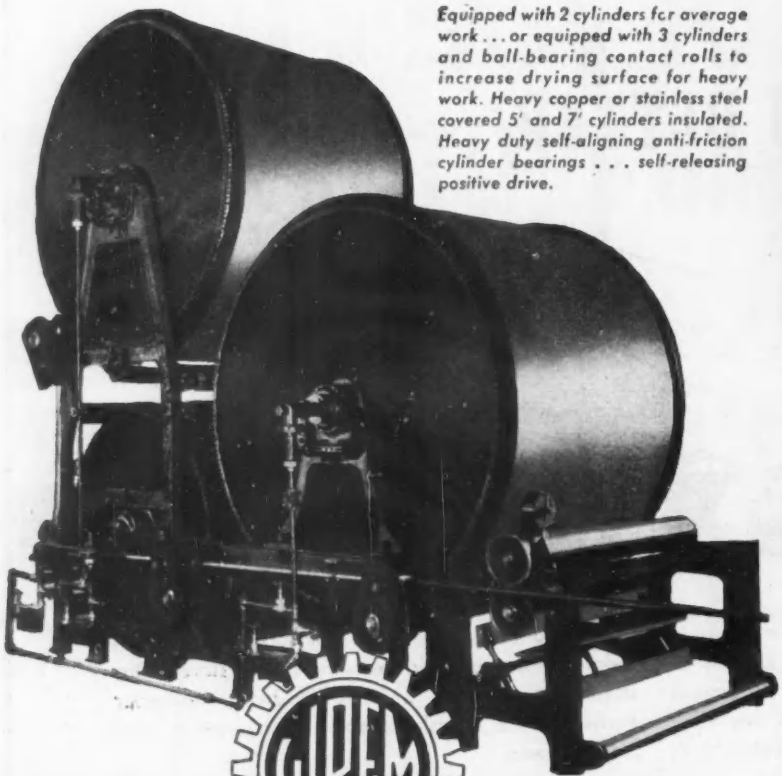
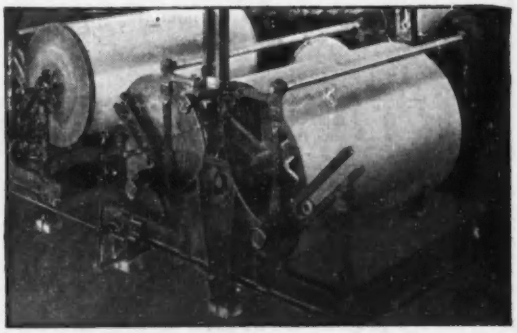
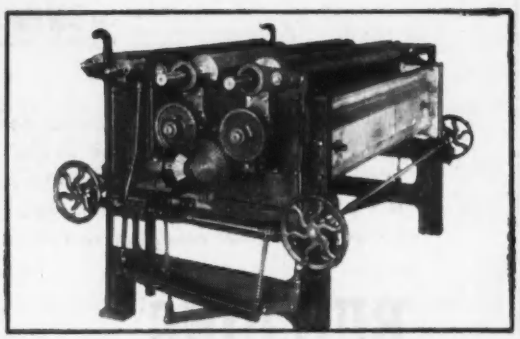


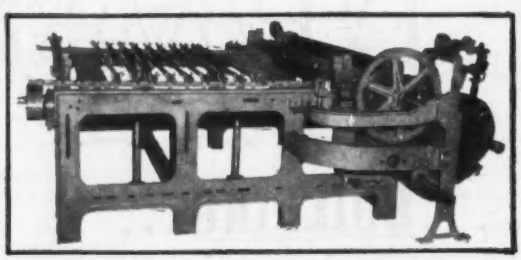
Equipped with 2 cylinders for average work . . . or equipped with 3 cylinders and ball-bearing contact rolls to increase drying surface for heavy work. Heavy copper or stainless steel covered 5' and 7' cylinders insulated. Heavy duty self-aligning anti-friction cylinder bearings . . . self-releasing positive drive.



WHITE CREEL (above) — positively driven — controls yarn stretch; makes sizing faster, more uniform; smooths starts and stops; eliminates breakage and waste. Also available: standard over-under type creel with continuous side rails or extra-height, close-coupled creel for limited space. All creels ball-bearing equipped.



Stainless steel SIZE BOX with extra deep bronze stuffing boxes. Size rolls mounted on ball-bearing journals. Special squeeze-roll lift eliminates strain . . . keeps squeeze rolls accurately positioned over size rolls.



HEAD END, built for single or double beams up to 26", is ball-bearing throughout, either friction or motor driven with variable speed transmission, variable speed single drive, or multi-motor drive. Independent beam wind-up for beams over 26" in diameter.

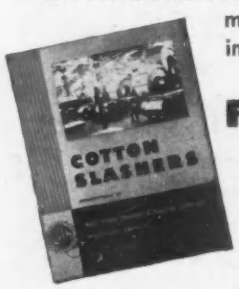
The new COTTON SLASHER

Sure cure for size troubles!

Here's a new, improved, mill-tested Slasher . . . combining many special features and equipment . . . that's designed to correctly size the lightest gauze or the heaviest sheeting at top speed and lowest cost.

Whatever your specific mill requirements and problems, the WPF&M Slasher can be adapted to fit your needs and cure your sizing troubles.

Check the many outstanding features found only in the WPF&M Slasher. Let us show you how modern slashing equipment and methods can increase production, improve quality and reduce cost.

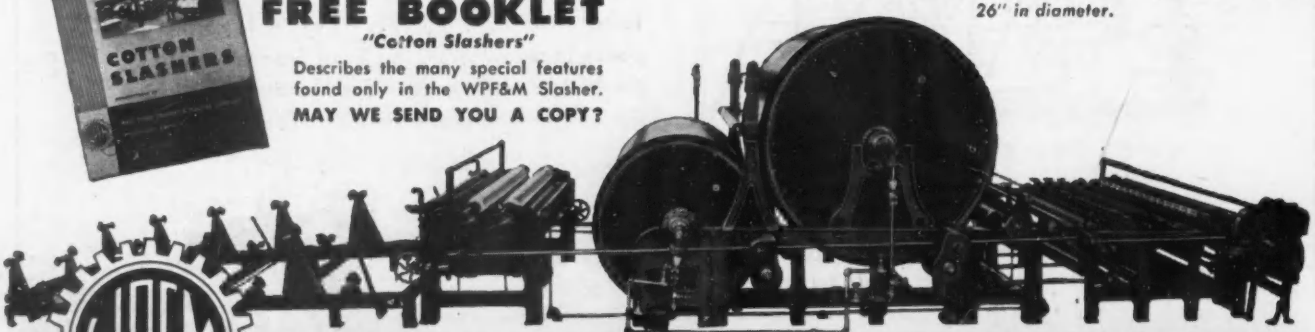


FREE BOOKLET

"Cotton Slashers"

Describes the many special features found only in the WPF&M Slasher.

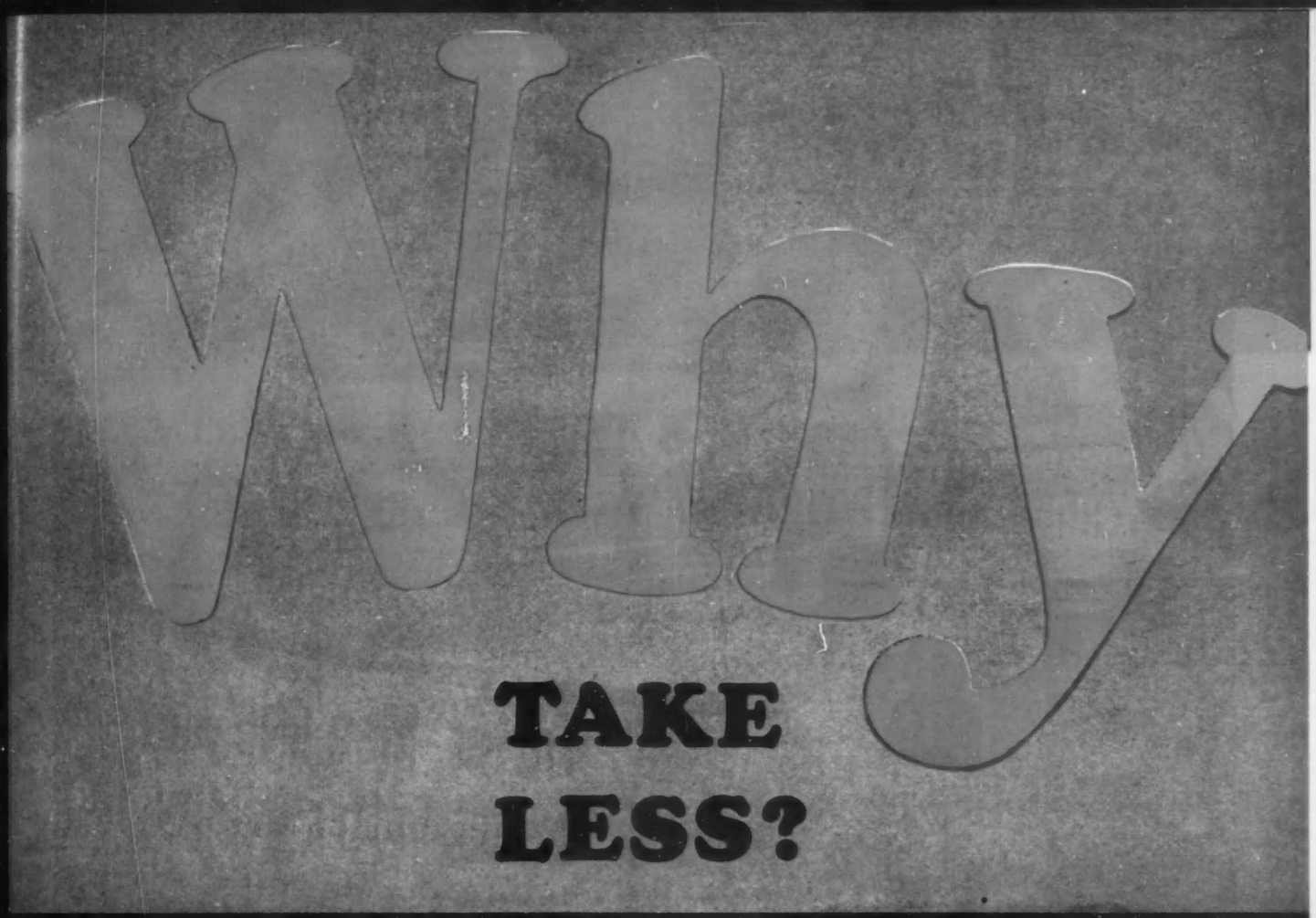
MAY WE SEND YOU A COPY?



Manufactured by

WEST POINT FOUNDRY & MACHINE CO.

WEST POINT, GEORGIA



Nacconol NR*

AMERICA'S LEADING SYNTHETIC DETERGENT

GUARANTEES

40% active organic content

MINIMUM!

WASHES • WETS • DISPERSES • FOAMS • EMULSIFIES IN HOT OR COLD SOLUTIONS AT ANY pH

COSTS LESS • DOES MORE

NATIONAL ANILINE DIVISION ALLIED CHEMICAL & DYE CORPORATION
40 RECTOR STREET, NEW YORK 6, N. Y. (BOwling Green 9-2240)

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Providence, R. I., 15 Westminster St.	Dexter 3008	Atlanta 2, Ga., 140 Peachtree St.	Cypress 2821
Chicago 10, Ill., 357 West Erie St.	SUperior 7-3387	Chattanooga 2, Tenn., James Building	CHattanooga 6-6347
Philadelphia 6, Pa., 200-204 S. Front St.	LOmbard 3-6382	New Orleans, La., Cotton Exchange Bldg.	Raymond 7228
San Francisco, Cal., 517 Howard St.	Sutter 7507	Portland 9, Ore., 730 West Burnside Ave.	Beacon 1853
Charlotte 1, N. C., 201-203 West First St.	CHarlotte 3-9221	Toronto, Canada, 137-145 Wellington St. W.	Elgin 6495

Reg. U. S. Pat. Off.

The TUFFERIZING PROCESS—developed and exclusively owned and used by Howard Bros. cuts and forms wires with an accuracy never before obtained in the making of card clothing. The wires are formed with precision and placed accurately in the famous Tuffer Foundation . . . when drawn on the cylinder they fit snugly—*sides perfectly parallel and every point in place.*

"Tuffer" Men help you to get Better Quality

Howard Bros. representatives are qualified to help you get the best possible results from your carding equipment. They are men of specialized training and experience who can give valuable assistance in improving quality and increasing efficiency in YOUR card room.

Here's what one large textile unit says: "We appreciate the excellent service your company has given us in the past. Your man came up and worked in our carding department, checked the condition of our card clothing, *doing an excellent job and to our benefit.* It is a pleasure to put our appreciation on the dotted line."

Time and time again we receive similar words from Howard Bros. customers.

Talk over your particular problems with a Howard Bros. representative. There's no obligation on your part. Get in touch with your nearest Howard Bros. plant or office.

HOWARD BROS. MFG. CO.
WORCESTER 8, MASSACHUSETTS
Southern Plants: Atlanta, Ga., and Gastonia, N. C.
Branches: Philadelphia, Pa., and Blanco, Texas
Direct Representation in Canada

TUFFER CARD CLOTHING

IMPROVES PRODUCTION ALL ALONG THE LINE

A-8

Rayon Reports

Prepared Monthly by American Viscose Corporation, New York, N.Y. January 1949

Avisco "Filamatic" Continuous Spinning Process Fundamental Advance in Rayon Technology

The discovery of an entirely new high-speed spinning technique by research engineers of American Viscose Corporation has resulted in a new continuous spinning process for rayon textile yarns.

The process, called "Filamatic," involves the use of a machine that is smaller, faster, and more efficient than machines now in general use.

It requires only a matter of seconds to produce dried and finished yarns as contrasted to the many hours consumed in the pot-spinning procedures.

New Process Produces Yarn of Superior Quality

Avisco yarns spun by the new "Filamatic" process have undergone extensive tests by the Textile Research Department of American Viscose. The results show that the yarns are remarkably uniform both in physical characteristics and dyeing qualities. Fine and medium yarn sizes can be produced by the machine—as well as the various lusters, twist ratios and package put-ups required by the textile industry.

20 Million Pound Capacity to be Installed

Work is already going ahead for the installation of the new "Filamatic" machine in one or more of American Viscose Corporation's viscose rayon yarn plants. However, the new installations will represent additional spinning capacity and will not replace present pot-spinning capacity.

The "Filamatic" process is an exclusive development of the American Viscose Corporation, and no licenses will be required for the construction or operation of the new high-speed machine. It is the culmination of a generation of research and development work on the part of the Corporation and can be regarded as one of the greatest fundamental advances in rayon technology, ranking in importance with the Topham spinning box, the double-godet, and continuous cake processing.

RAYON 20 YEARS AGO

NEW YORK, January, 1929—Beach pajamas made of rayon and sponsored by the smart world are a fashion success. They are seen now at the winter resorts, and will appear in increasing numbers in the summer.

LONDON, January, 1929—The term "Rayon," as a substitute for "artificial silk" is at last being adopted by the trade in Great Britain. The leading producers announced their acceptance of the term in an advertisement last week-end.

NEW YORK, January, 1929—Rayon bedspreads with immense popular appeal are on the market and will be placed on hundreds of thousands of beds in American homes during the next few months.

MAKE USE OF *Avisco*® 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

AMERICAN VISCOSE CORPORATION

America's largest producer of rayon

Sales Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

SITUATION WANTED
Specially trained Technical Staff; specialized knowledge of *specific industries*; 67 years of experience; impressive record of accomplishments; excellent references from many leading companies. Call or write SOLVAY TECHNICAL SERVICE.
SOAP CHIPS

Next time you run into a technical problem on an operation or process involving SOLVAY products, remember that there is available to you the service of a technical staff *with 67 years of cumulative experience.*

Each man on the SOLVAY TECHNICAL SERVICE staff has an extensive knowledge of the industry he serves . . . he thoroughly knows the uses and applications of alkalies and our other chemicals in that industry.

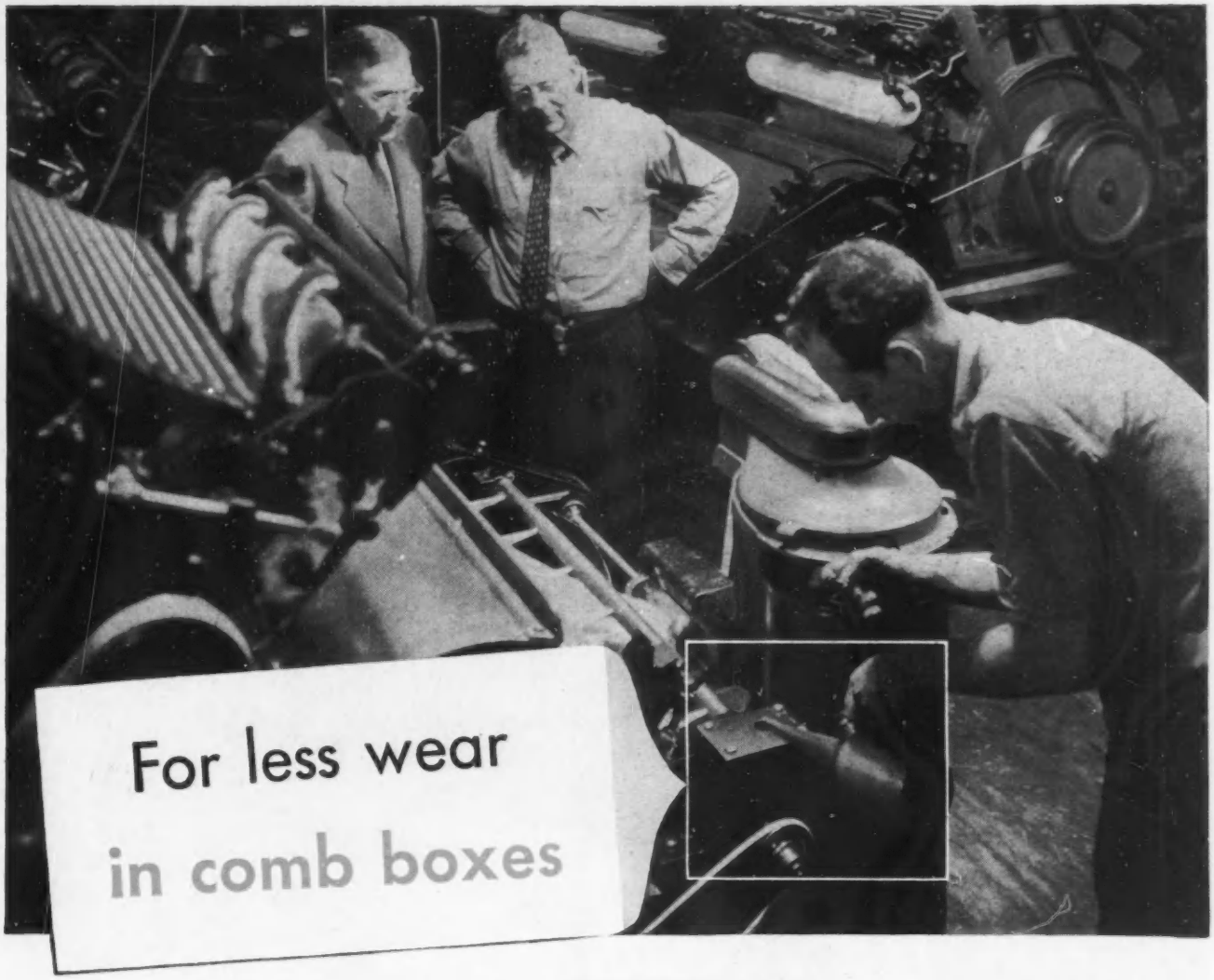
That's why many leading companies have come to rely on SOLVAY TECHNICAL SERVICE with its wealth of experience and information. They know that our experts have successfully solved problems not ordinarily referred to the technical staff of a producer of chemicals.

SOLVAY TECHNICAL SERVICE is at your service without cost or obligation. Write us about your problem today, in strict confidence.

Industry-Wise
SOLVAY Technical Service
Specialists in Specific Industries

SOLVAY SALES DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 Rector Street, New York 6, N. Y.

BRANCH SALES OFFICES:
Boston • Charlotte • Chicago • Cincinnati • Cleveland
Detroit • Houston • New Orleans • New York
Philadelphia • Pittsburgh • St. Louis • Syracuse



Gulf Lubrication Engineers recommend

GULF HARMONY OIL

"Always keep your comb boxes filled to the proper level with Gulf Harmony Oil," is the advice of Gulf's practical Lubrication Engineers. They know from experience that this quality lubricant insures trouble-free comb box operation indefinitely.

Gulf Harmony Oil has superior lubricating value—providing long lasting protection against excessive wear, overheating, and leakage in comb boxes. It has superior resistance to oxidation—does not form harmful sludge. Thus small oil passages are kept clean and free.

For longer life and lower maintenance costs, keep your comb boxes filled to the proper level with Gulf Harmony Oil. To get the benefits possible through the use of this quality lubricant and for expert help on other phases of improved lubrication, call in a Gulf Lubrication Engineer today.

GULF INDUSTRIAL LUBRICATION

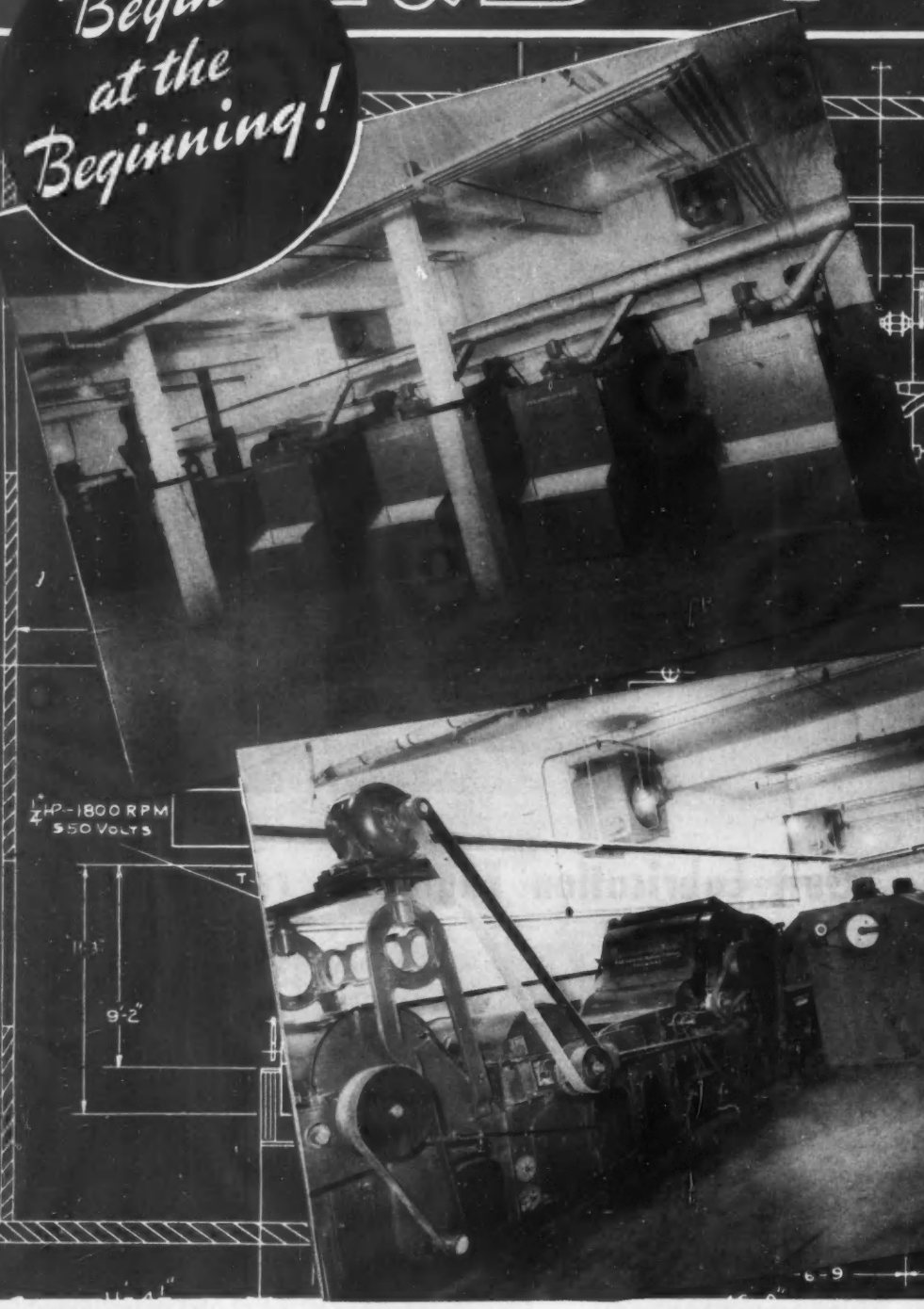
Gulf Oil Corporation · Gulf Refining Company

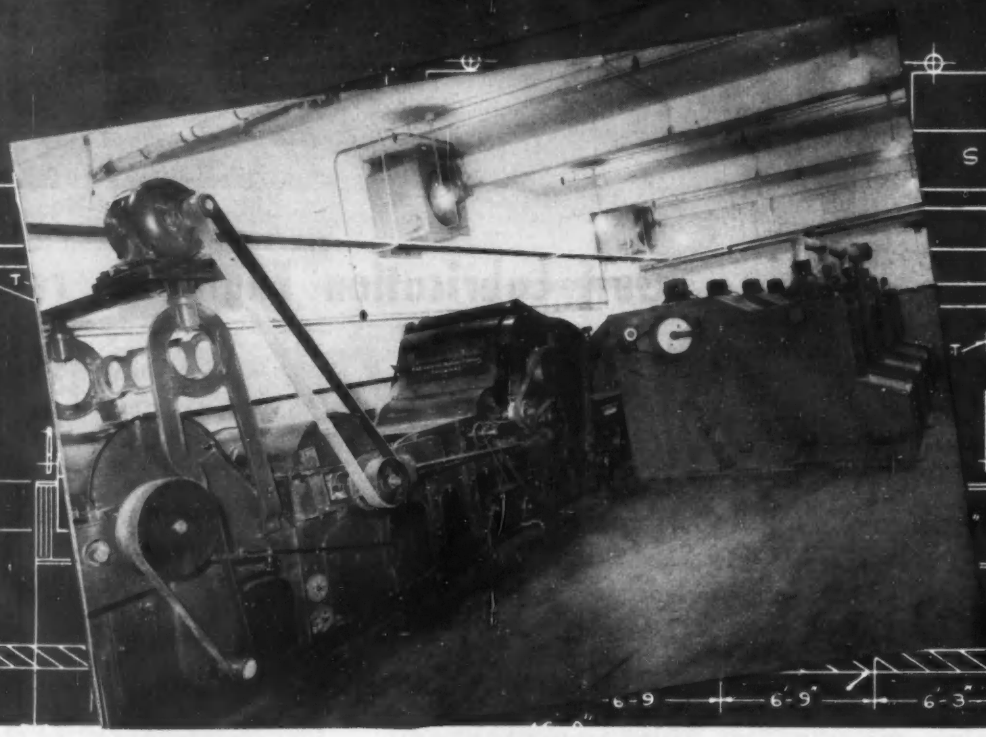
Division Sales Offices:

Boston · New York · Philadelphia · Pittsburgh · Atlanta
New Orleans · Houston · Louisville · Toledo

H&B Opening

Begin at the Beginning!



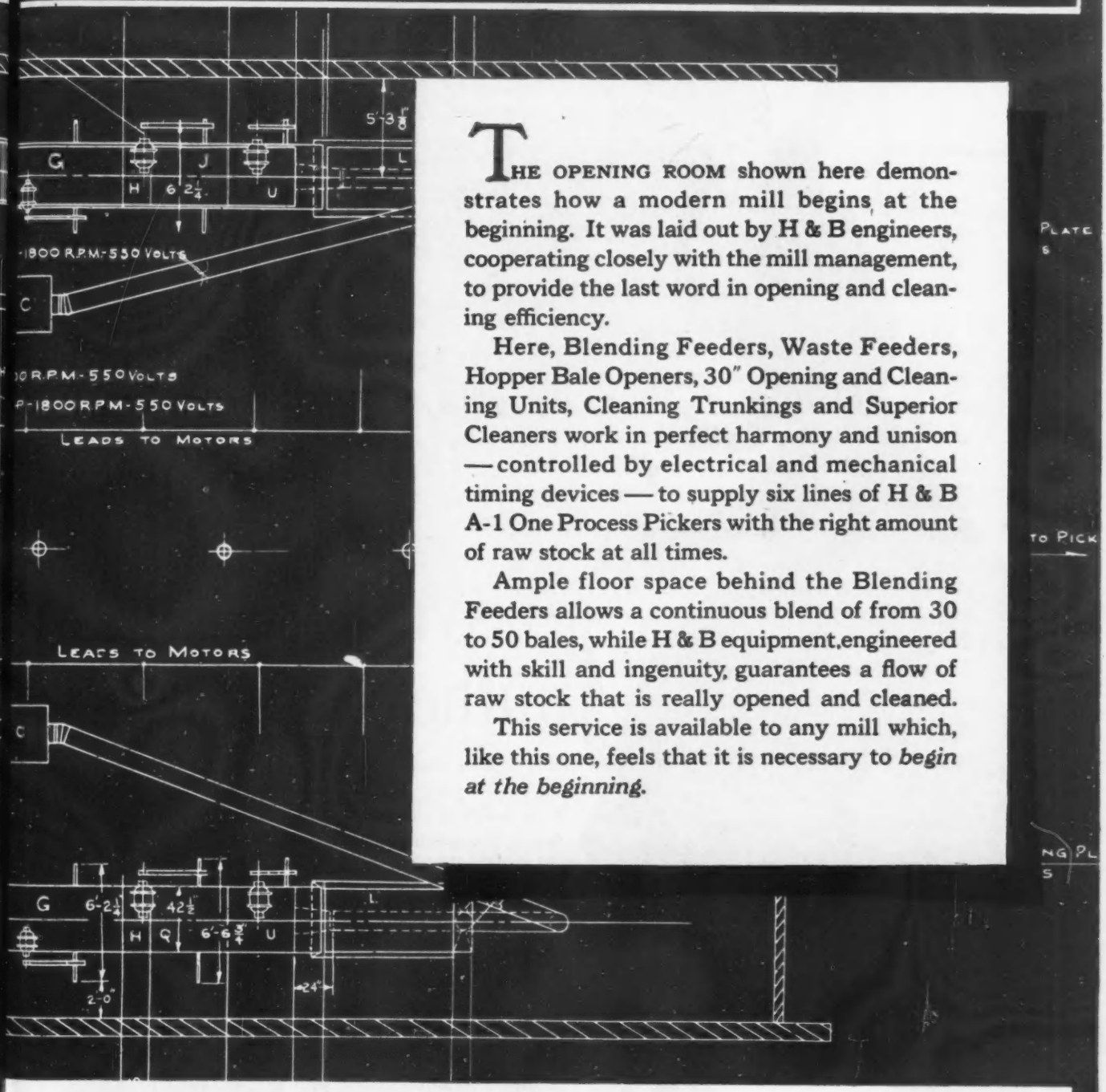


H&B AMERICAN

Builders of Modern

FACTORY, EXECUTIVE OFFICES AND EXPORT

Room Machinery



THE OPENING ROOM shown here demonstrates how a modern mill begins at the beginning. It was laid out by H & B engineers, cooperating closely with the mill management, to provide the last word in opening and cleaning efficiency.

Here, Blending Feeders, Waste Feeders, Hopper Bale Openers, 30" Opening and Cleaning Units, Cleaning Trunkings and Superior Cleaners work in perfect harmony and unison — controlled by electrical and mechanical timing devices — to supply six lines of H & B A-1 One Process Pickers with the right amount of raw stock at all times.

Ample floor space behind the Blending Feeders allows a continuous blend of from 30 to 50 bales, while H & B equipment, engineered with skill and ingenuity, guarantees a flow of raw stock that is really opened and cleaned.

This service is available to any mill which, like this one, feels that it is necessary to *begin at the beginning.*

MACHINE CO.

Textile Machinery

DIVISION **PAWTUCKET, RHODE ISLAND, U.S.A.**

BRANCH OFFICES

ATLANTA, GA.
815 CITIZENS AND SOUTHERN NATIONAL BANK BUILDING

CHARLOTTE, N. C.
1201 JOHNSTON BUILDING

A synthetic with authentic appeal

This cocktail classic is an acetate fabric. To accomplish this perfect tone on tone color effect and soft flowing drape involved closest cooperation between chemist and dyer in the selection and application of the proper dyes and finishes.

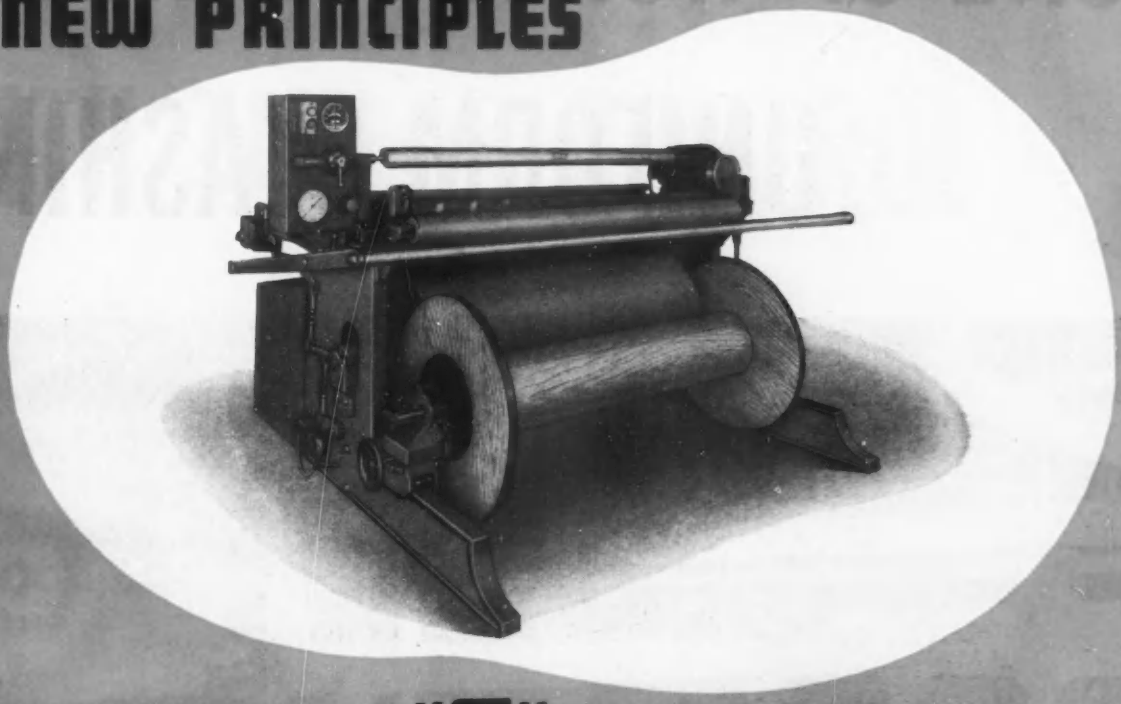
If you have difficulty in achieving ideal draping qualities and color fastness, get the complete story on Amalgamated products and services.

Products of Amalgamated Chemical Corporation include Fabric Finishes, Hosiery Finishes, Dyeing Assistants and Scouring Agents. Amalgamated Field Representatives are trained, experienced technical men ready to assist you with textile chemical problems in your mill. In addition, a modern research and production laboratory with complete facilities is available for service to you. For better fabrics, bigger profits, get the full details on Amalgamated Service.

AMALGAMATED CHEMICAL CORP., Phila. 34, Pa.
Southern Division: 1819 Spring Garden Street, Greensboro, N. C.

Amalgamated

NEW DESIGN
NEW PRINCIPLES



NEW ALLEN "G" WARPER

Radically new warp density control. Perfect uniformity through hydraulic cylinder control. Operator can vary density at will. No more hard-shelled, soft-centered beams.

- **4 to 1 variable speed range by push button control.**
- **New winding method eliminates crossed ends.**
- **Front positive expansion comb.**
- **Rear spring expansion comb.**
- **Excellent for warping dye beams.**
- **A number of other features contributing to a new standard of warper operation.**

ADDING UP TO FASTER PRODUCTION OF HIGHER QUALITY WARPS

REQUEST DESCRIPTIVE LITERATURE

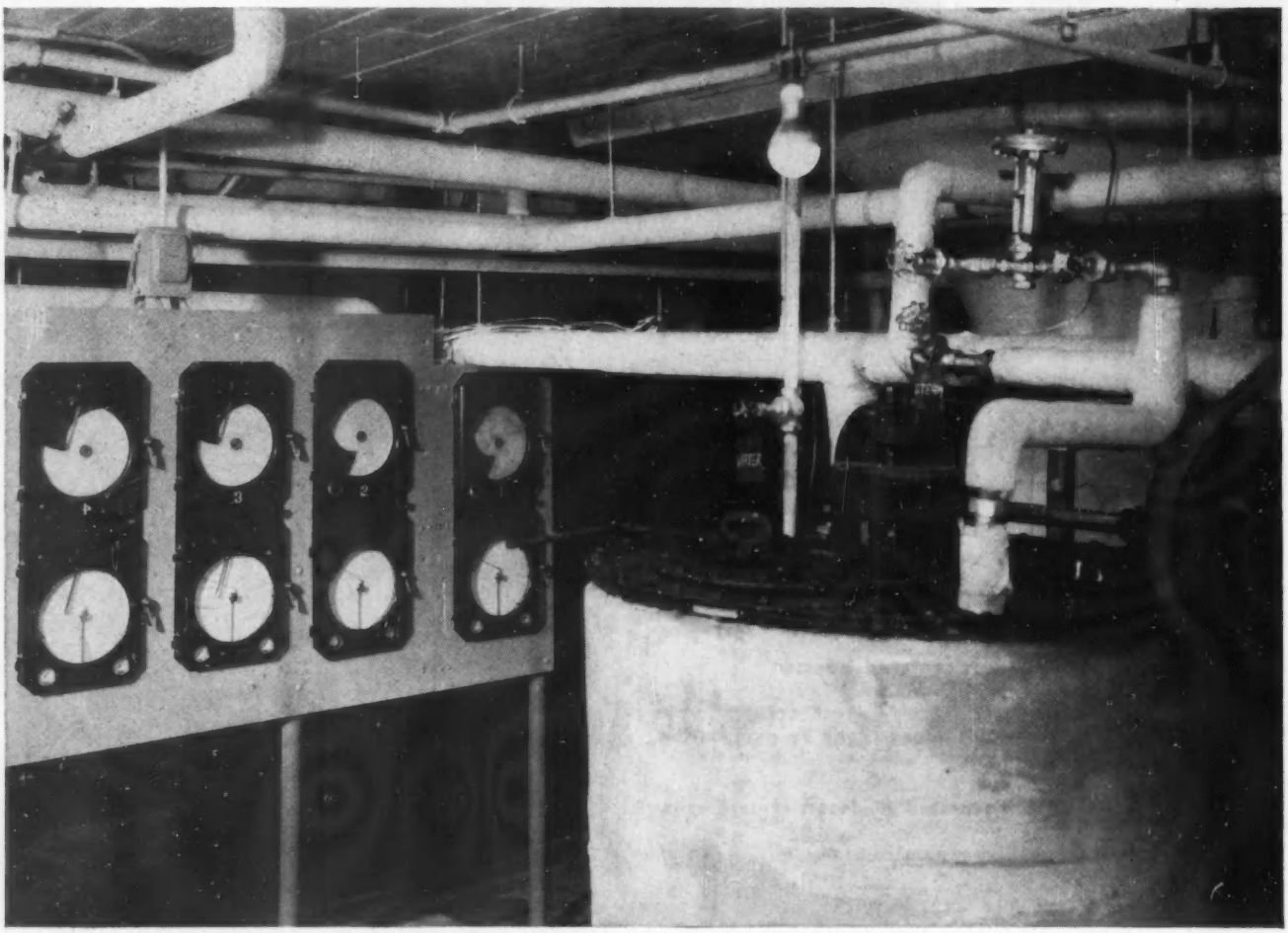
Cotton and Rayon Beam Warpers
Ball Warping Machines
Narrow Fabric Warpers
Intermediate Dresser Stand for Woolen and Worsted Warp Yarns
Expansion Neck Reeds
All types of Expansion, Warper, Beamer and Slasher Combs
Replacement parts for Saco-Lowell and Entwistle Warpers
ALLEN COMPANY

ALLEN
COMPANY

General offices — 156 River Road
New Bedford, Mass.

Representatives in all Textile Localities and all Principal Countries of the World.

ONE OF WORLD'S LARGEST UNIFORM SLASHING

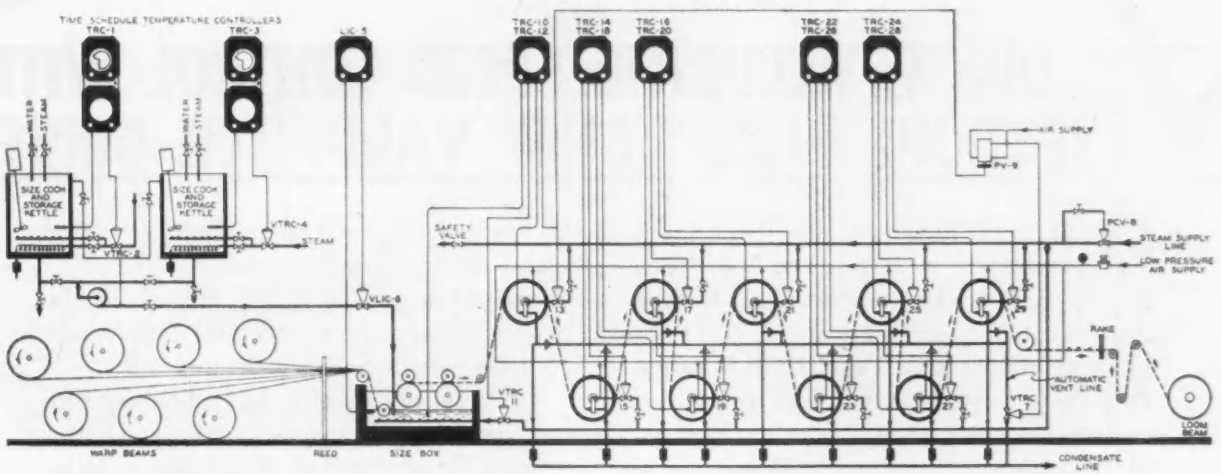


ABOVE is one of a battery of 8 size cooking and storage kettles at Dan River Mills, Danville, Va., one of the world's largest textile mills. Each kettle is controlled by a Taylor Fulscope Time Schedule Controller. Each batch of size is cooked according to a predetermined time-temperature schedule. The Time Schedule Controller precisely and automatically controls the rate of rise, assuring proper gelatinization of the starch granules. Result—smooth, uniform size.

All the operator has to do is load the kettle. Then he pushes a start button and the Fulscope takes complete control—positioning the steam valve during controlled rate of rise, timing and controlling the hold period near the boil. The flash of a red signal tells the operator when the cook has ended. Then steam is automatically shut off and size is ready for use.

That's just the beginning. The drawing above (right) shows how Taylor Control is contributing to uniformity throughout Dan River's complete slashing operation.

TEXTILE MILLS ASSURES WITH TAYLOR CONTROL



Starting at the size box: Fulscope Temperature Controller automatically maintains size box temperature. Constant size box level is maintained for proper impregnation of yarn by a Fulscope Indicating Controller.

Next, that row of Fulscope Temperature Controllers (top) maintains the precise cylinder temperature needed for uniform drying. Cylinders also are automatically vented. All this adds up to five ways Taylor Automatic Slasher Control is helping Dan River Mills keep quality up and costs down—*and can do the same for you:*

1. ***Savings in steam and materials in size preparation.***
2. ***More efficient utilization of size cooking equipment.***
3. ***Steam savings in slasher drying.***
4. ***More uniformly sized warp yarn.***
5. ***Higher weave room efficiency.***

Ask your Taylor Field Engineer for complete information on our control systems for all four slashing steps: *size cooking temperature control, storage kettle temperature control, size box level control,* and finally, *slasher cylinder control.* Or write Taylor Instrument Companies, Rochester, N.Y., or Toronto, Canada. *Instruments for indicating, recording and controlling temperature, pressure, humidity, flow and liquid level.*

Taylor Instruments

MEAN

ACCURACY FIRST

IN HOME AND INDUSTRY

Cost-Cutting

QUICK, ACCURATE SPEED CONTROL WITH TEXROPE WIDE RANGE VARI-PITCH DRIVES!

QUICKLY SET EACH MACHINE for highest production with Texrope Vari-Pitch Drives. Speed range is wide. Operation is clean, smooth, quiet and positive. Yet with all these advantages, Texrope wide range Vari-Pitch Drives cost you less to buy, install and operate than any other kind of speed control.

Stationary Control—Lowest Cost Texrope Vari-Pitch speed changing method. Change speeds in five to eight minutes. Range — 50% to 100%.

Motion Control—Speeds changed instantly, *while machine is running.* Same 50% to 100% range. Greatest savings where speed changes are frequent.

Speed Changers — 375% range. Single handwheel sets speed accurately *while machine is running.*

Find out how much time and money you can save with Texrope Vari-Pitch Drives — in wide or standard range. Your Allis-Chalmers Authorized Dealer or District Office will gladly show you the actual savings on your operations in dollars and cents. Call one of these experts today.

ALLIS-CHALMERS, 1054A SO. 70 ST.
MILWAUKEE, WIS.

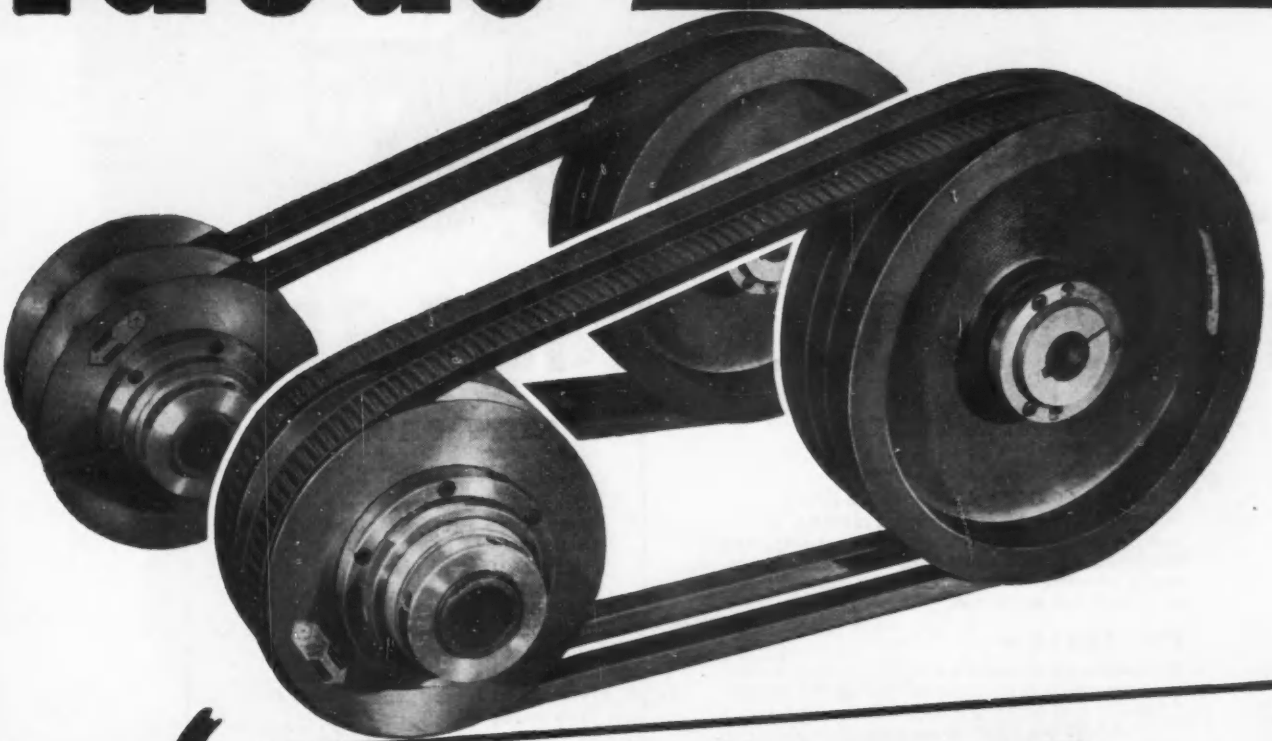
SPECIAL TEXTILE MOTORS CUT MAINTENANCE AND DOWN-TIME!

QUICK-CLEAN MOTOR — the original free-air-flow motor blows lint and dirt right through. Particles cannot adhere to smooth inner surfaces . . . motors cannot clog. Pre-lubricated sealed bearings run five years without attention. Will not leak grease to collect lint and soil fabrics. 3 through 15 hp. Many ratings from stock, others fast delivery.

LOOM MOTORS — Totally-enclosed non-ventilated type especially designed for loom service. Prelubricated bearings operate five full years without maintenance. Cast steel frame with welded steel reinforcement blocks for extra rigidity. Double-dipped, double-baked insulation for longer life. Immediate delivery on ¾ and 1 horsepower ratings.

Texrope, Vari-Pitch and *Quick-Clean* are Allis-Chalmers trademarks.
A 2598

Ideas FOR TEXTILE MEN!



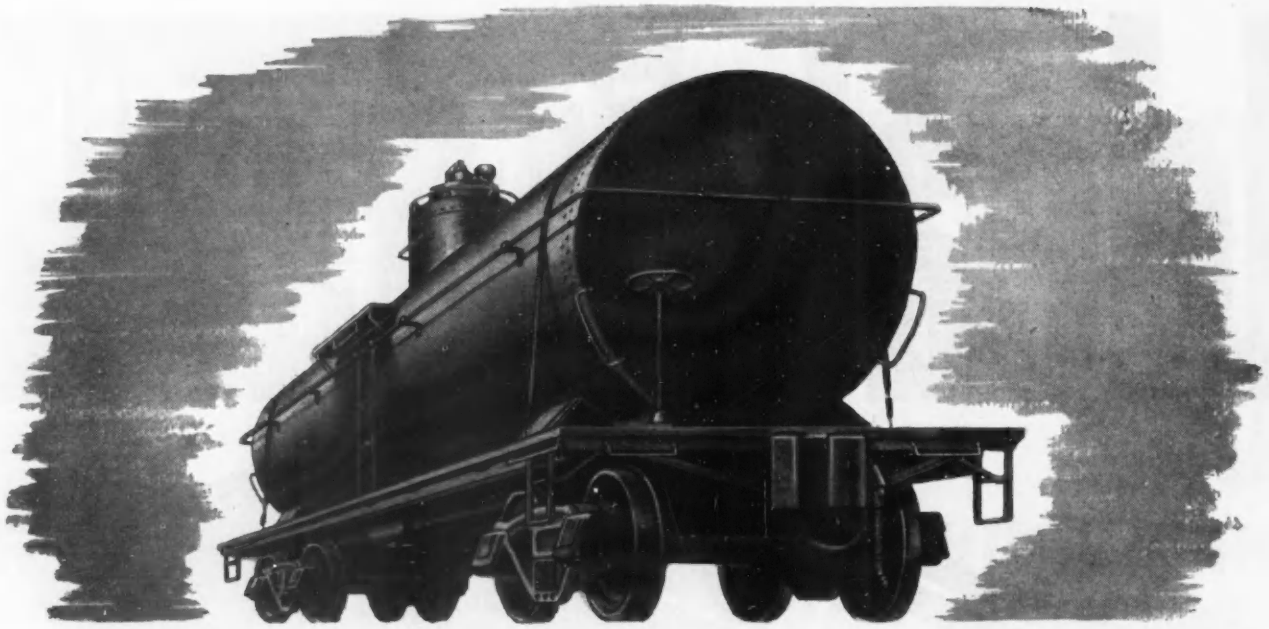
NEW SUPER-FAST DIELECTRIC CAKE DRYING AND TWIST SETTING

Many mills have greatly improved product quality and reduced costs with dielectric heaters. High speed operation, close control and uniform heating throughout produces results unobtainable by other methods.

Typical examples: Drying reduced from days to minutes. Shrinkage variation below 0.4%. Twist set with exposure of 7 minutes at total cost of 1/10th cent per lb. Greater uniformity of deadness. To investigate what dielectric heating can save in your production, call your nearby A-C district office.

ALLIS-CHALMERS

Originators of the Multiple V-Belt Drive for the Textile Industry



EMERY PRODUCTS FOR TEXTILES

TWITCHELL OIL

FOR WOOL

Twitchell 7410 Wool Oil and Twitchell 7420 Worsted Oil, for lubrication in carding, combing, spinning and weaving operations, are finished oils ready for use, self-emulsifying, easily scourable. Twitchell 7430 most readily scourable oil available.

FOR COTTON

Non-staining Twitchell Oil 7250 for all finishing, produces fastest rewet, softest hand. Oil 7240 for fast wetting back, medium hand.

Twitchell Oil 7231 (formerly 3X—the long established standard rewetting agent) has the least effect on hand. All three recommended for finishing regular or Sanforized fabrics, for slashing.

FOR RAYONS

Twitchell Oils 7681, 7685, 7687 adjusted to viscosity specifications, to lubricate knitting and weaving yarns and Twitchell 7620, a coning oil for nylon yarn, are non-staining, easy scouring oils. For crepe yarn soaking, Twitchell 7810 is compatible with starches, gums and other sizing agents.

FATTY PRODUCTS

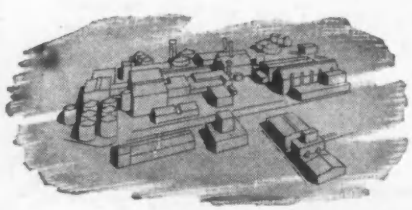
FATTY ESTERS

Emery 2210 Glyceryl Monostearate
Emery 2510 Propylene Glycol Monostearate
Emery 2410 Diethylene Glycol Monostearate
Emery 2221 Glyceryl Mono-oleate
Emery 2301 Methyl Oleate
Emery 2302 Propyl Oleate
Emery 2230 Glyceryl Trioleate
Hyfac 2130 Hydrogenated Fish Oil Glyceride

FATTY ACIDS

Emersol 120 Standard Stearic Acid
Emersols 210 & 220 Elaine (Oleic Acid)
Emersols 211 & 221 Low Titre Elaines
Emery 621 & 622 Coconut Fatty Acids
Hyfacs 410 & 420 Hydrogenated Tallow F.A.
Hyfacs 430 & 431 Hydrogenated Fish Oil F.A.

Descriptive literature—full specifications on request



EMERY

INDUSTRIES, INC.

CAREW TOWER • CINCINNATI 2, OHIO

TEXTILE PRODUCTS

3002 Woolworth Building
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Representatives:

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Schibley & Ossman, 33 Public Square, Cleveland 13, Ohio
Ecclestone Chemical Co., 2673 Guoin, Detroit 7, Mich.
H. H. Loomis, 369 Pine St., San Francisco, Cal.

STEARIC ACID • OLEIC ACID • ANIMAL AND VEGETABLE FATTY ACIDS • TWITCHELL PRODUCTS • PLASTICIZERS

AMACID* WOOL COLORS
provide the answer to the demand for better color fastness in textiles

*A **complete range** of dye groups...*

AMACID *Fast*
AMACID *Light*
AMACID *Milling*
AMACID *Neutral*

Selected Amcid Dyes are the wool-dyer's defense against color destruction by sunlight, washing, sea-water, carbonizing, perspiration, dry-cleaning.

Amacid colors meet all fastness requirements and shade demands for every type of wool-dyeing.

Another American Aniline achievement in effective color fastness. For detailed information regarding your own particular wool-dyeing requirements, consult our nearest branch. Experienced A.A.P. technicians are always happy to be of service.

AMERICAN ANILINE PRODUCTS, INC.

50 Union Square, New York, N. Y. • **Plant: Lock Haven, Pa.** • **Branches:** Boston, Mass. Providence, R. I. • Philadelphia, Pa. • Charlotte, N. C. • Chicago, Ill. • Los Angeles, Cal. Chattanooga, Tenn. • **Dominion Anilines & Chemicals Ltd.** • Toronto, Canada • Montreal, Canada

*Reg. U. S. Pat. Off.

NEW PICKERS FOR OLD

You can have your old pickers rebuilt exactly like new machines. The basic design of a picker has not changed in more than 50 years, and therefore a thoroughly modern picker can be built right into the old frames at a handsome saving.

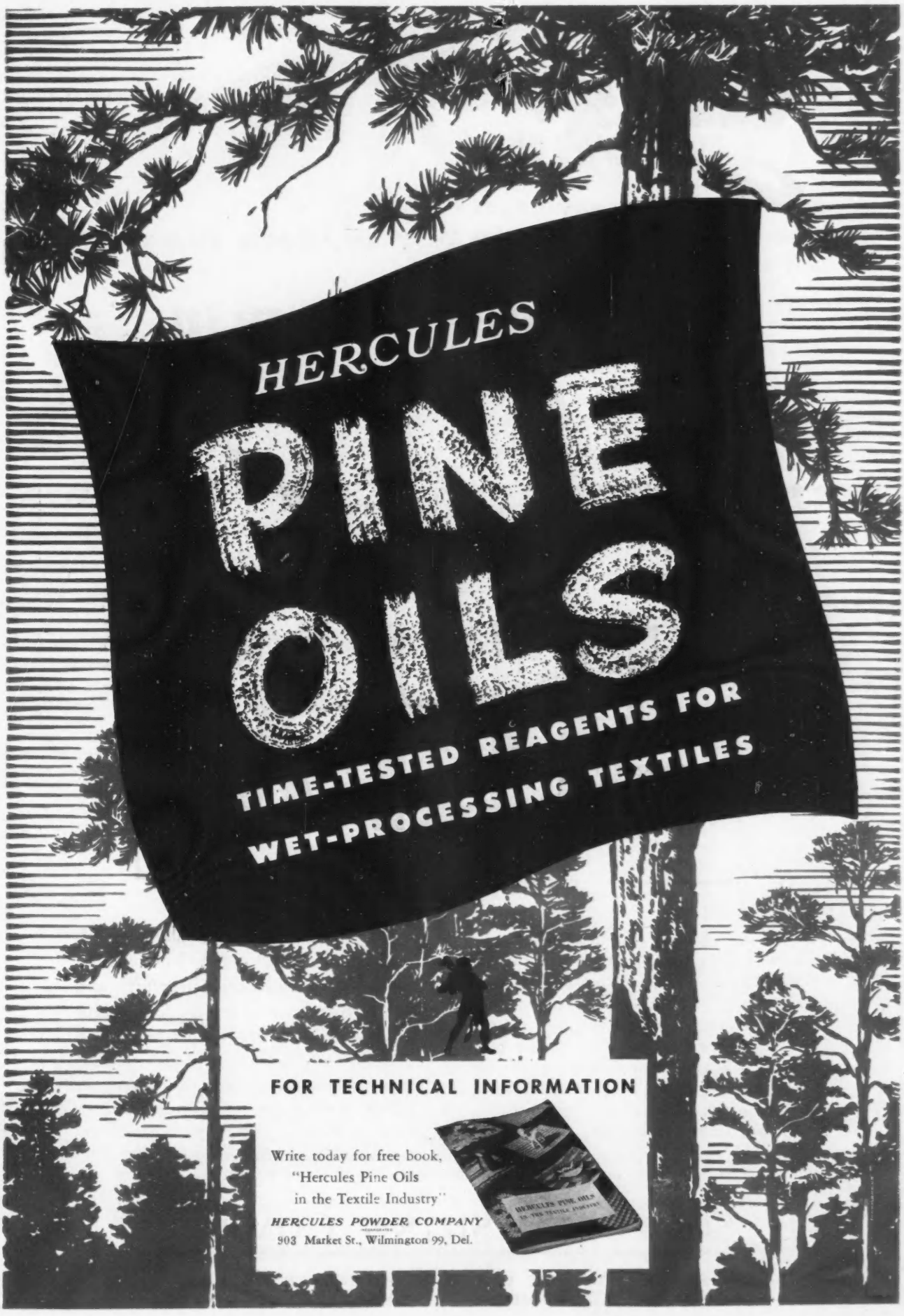
Where it is not feasible to send your pickers to us for rebuilding, we will exchange them for rebuilt pickers of the same model. Our truck delivers a new picker at your plant and takes away an old one. The new picker can be making laps the day after it is delivered.

Where pickers do not need complete rebuilding, but should have a thorough overhauling, we can handle this right in your picker room, and furnish one of our skilled erectors to do this work.

We give 24-hour service on picker repair part orders.

AldricH MachinE

Greenwood WorkS South Carolina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PINE
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TIME-TESTED REAGENTS FOR
WET-PROCESSING TEXTILES
FOR TECHNICAL INFORMATION
Write today for free book,
"Hercules Pine Oils
in the Textile Industry"
HERCULES POWDER COMPANY
903 Market St., Wilmington 99, Del.

Sizing

. . . in the modern manner

A REPORT FOR 1948

Announcement to the industry of the patented process for the separate application of warp lubricant was made in March, 1948. Widespread response has kept us actively engaged installing Warp Lubricator Units in 67 mills in the states of Georgia, Alabama, Louisiana, South Carolina, North Carolina, Virginia, Indiana, Maine, Massachusetts, Pennsylvania, and New York for applying SLIX, the new type liquid lubricant.

SLIX

SLIX, by actual application, has been found the ideal warp lubricant for many and varied fabrics including sheeting, print cloth, sateen, twill, drill, suiting, chambray, denim, leno, corset fabric, gabardine, osnaburg, lawn, whipcord, poplin, broken twill, corduroy, gauze, narrow tape, birdseye, gingham, handkerchief fabric, marquisette, broadcloth, flannel, and ticking.

175 million yards of cloth — both cotton and spun rayon — have been woven with SLIX-treated warp and the performance carefully noted. Mill reports consistently reflect increased weaveroom efficiency and production; fewer loom stops—both in warp and filling; a decrease in seconds attributable to sizing; and more simple removal in the desizing operation.

SOUTHERN SIZING COMPANY

INCORPORATED 1930

POST OFFICE BOX 167
ATLANTA 1, GEORGIA

•

POST OFFICE BOX 128
EAST POINT, GEORGIA

GOOD NEWS IF YOU ARE DECATING HARD TO COOL FABRICS

Van Vlaanderen introduces a double pump machine to reduce decating time of hard to cool fabrics.

The Van Vlaanderen single cylinder, single pump decating machine has always produced more yardage and better quality than any other single or double cylinder decater.

Now this top performance has been improved. Cooling off time is materially reduced by the new double pump decater. This advantage is of special interest to those decating fabrics requiring longer time in cooling. For those, at present, decating goods that require less time the machine can be supplied with one pump and the other pump can be installed later if needed. Many of our recent machines now in service can be equipped with the second pump.

Write for full specifications and price.

VAN VLAANDEREN MACHINE COMPANY

370 Straight Street, Paterson 3, New Jersey

World's largest manufacturer of machines for processing modern fabrics

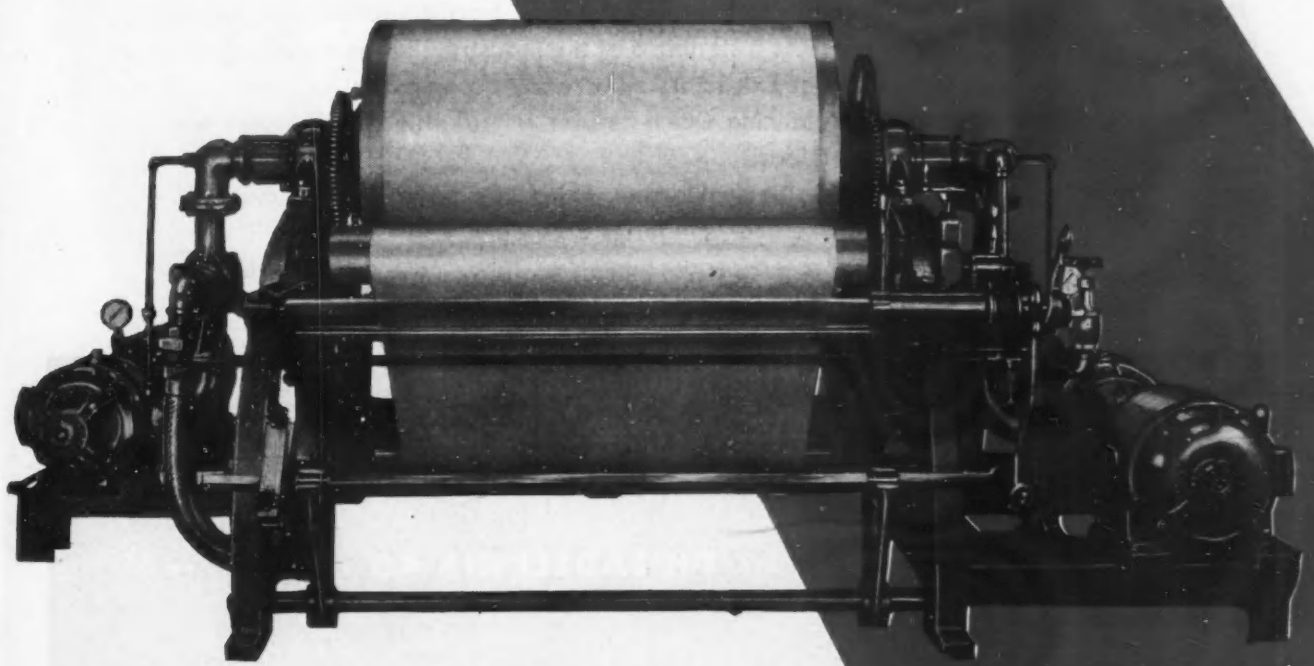
BETTER DECATER BLANKETS

Immediate Delivery

New improved superior double face sateen blankets now stocked in 52", 56", and 72" widths and lengths from 400 to 1000 yards.

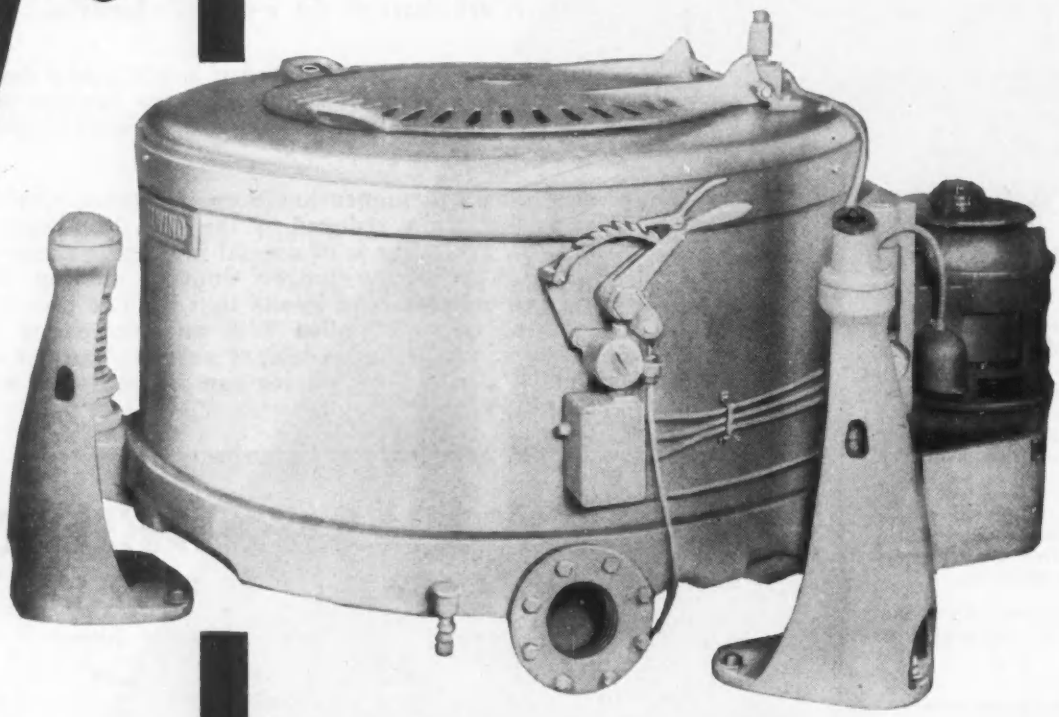
Now used on hundreds of decaters, this blanket gives longer service, better quality work and better production.

Send for a sample of this blanket. Telephone, telegraph or write now.



Fletcher EXTRACTORS

"SMOOTH AS SILK!"



AS DELICATE AS A WOMAN'S HAND—

when it comes to handling the most fragile fabrics, the Fletcher "Whirlwind" is a standard of the industry. Rugged and dependable, Fletcher Extractors offer ready accessibility, large capacity and self-balancing which assures remarkable stability even with unbalanced loads.

Remember! only Fletcher Extractors have the automatic hydraulic brake and "Fingertip Control."

For increased production—less labor cost and long efficient service—your best bet is Fletcher!

Fletcher Extractors come in 6 sizes— to suit your requirements

Write today for descriptive literature

FLETCHER WORKS

225 GLENWOOD AVE. **PHILADELPHIA 40** ESTABLISHED • 1850

Here, PC Foamglas insulation is being applied on the roof of the Grace Bleachery, The Springs Cotton Mills, Lancaster, S. C. Ingold Company, Inc., Hickory, N. C., Contractor. Avrett & Ledbetter Roofing & Heating Company, Charlotte, N. C., Associate Contractor. →

Beat the Humidity . . . with this permanent insulation

• The high humidity levels maintained in textile mills eventually cause many insulating materials to lose their insulating efficiency. But PC Foamglas—because it is glass—retains its original insulating efficiency permanently.

Composed of millions of tiny hollow glass cells, the big, rigid blocks of Foamglas do not even require a vapor seal to exclude destructive moisture. They are waterproof, fireproof, verminproof.

PC Foamglas does not rot, check, warp, swell or shrink. You can use it in walls and floors, on roofs and ceilings, without fear of costly repairs, maintenance or replacement.

When you are figuring on insulation, make sure you have complete information on PC Foamglas. Our latest authoritative booklets are yours for the asking. Just send in the convenient coupon and *free* copies will be forwarded to you.

This is FOAMGLAS

The entire strong, rigid block is composed of millions of sealed glass bubbles. They form a continuous structure, so no air, water, vapor or fumes can get into or through the Foamglas block. In those closed glass cells, which contain inert air, lies the secret of the material's permanent insulating efficiency.

FOR ADDITIONAL INFORMATION SEE OUR INSERTS IN SWEET'S CATALOGS

Pittsburgh Corning Corporation
Room 404-9, 632 Duquesne Way,
Pittsburgh 22, Pa.

Please send me without obligation, your FREE booklets on the use of PC Foamglas Insulation for:

Roofs_____ Walls_____ Floors_____

Name_____

Address_____

City_____ State_____

PITTSBURGH PC CORNING ® **FOAMGLAS INSULATION**

. . . when you insulate with FOAMGLAS . . . you insulate for good!

HAYES BEAMS CUT YOUR PRODUCTION COSTS

It is now possible to operate at higher machine speeds by using Hayes Aluminum or Magnesium Beams. Even at these higher speeds there are far fewer rejects than previously experienced at slower speeds. Weighing approximately half as much as conventional beams and being well balanced and true running, Hayes beams rotate smoothly without vibration. The heads have negligible spread contributing to better selvages. By drastically reducing the number of rejects, Hayes Beams increase your profit margin. They will not warp, splinter, chip or rust and there are no sharp edges to snag the thread.

These lightweight beams have many additional advantages. They reduce downtime and worker fatigue, and increase the productive capacity of your manpower. They reduce shipping costs. Possessing great strength, they withstand years of hard wear and abuse yet require practically no maintenance.

Write or wire today for complete information and costs whether your requirements are for Section Beams, Tricot Beams, or Loom Beams.

Send for Catalog No. 1-21

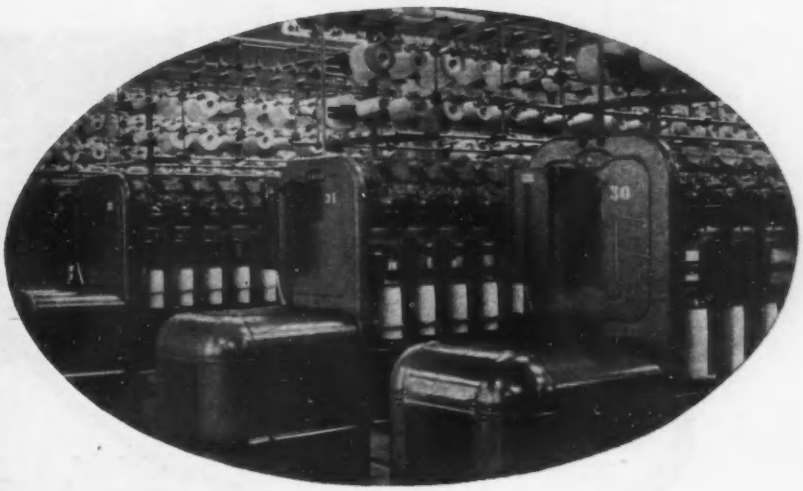
HAYES INDUSTRIES, INC.
HOME OFFICE: JACKSON, MICHIGAN, U. S. A.

VERNEY CORP.

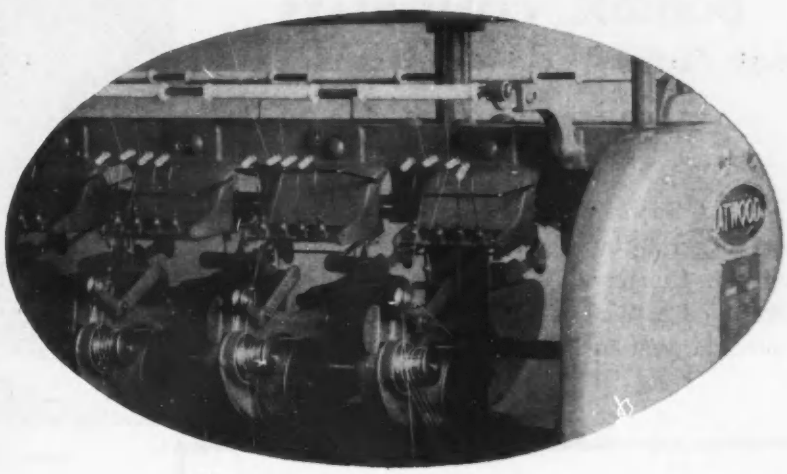
TWISTS SPUN RAYON ON MODEL 10'S

UNIFORM TWIST

IS GUARANTEED BY SEVERAL ATWOOD FEATURES



Twister bobbins of spun rayon, that are uniform from bobbin to bobbin and from spindle to spindle, are produced by The Verney Corp., Brunswick, Maine, on Atwood Model 10 Ring Twisters. These are the all-purpose ring twisters with automatic stop motions for each end and each ply.



Mounting of supply creel to provide free delivery . . . accurate control of tension . . . constant yarn speed delivered by *feed rolls* . . . smooth traverse of ring holder rail . . . rigid mounting of rings and ring holders . . . and use of one endless, lapless belt to give uniform speed from spindle to spindle . . . all contribute to accurate and uniform control of twist on the Model 10.

UNIVERSAL WINDING COMPANY

ATWOOD DIVISION

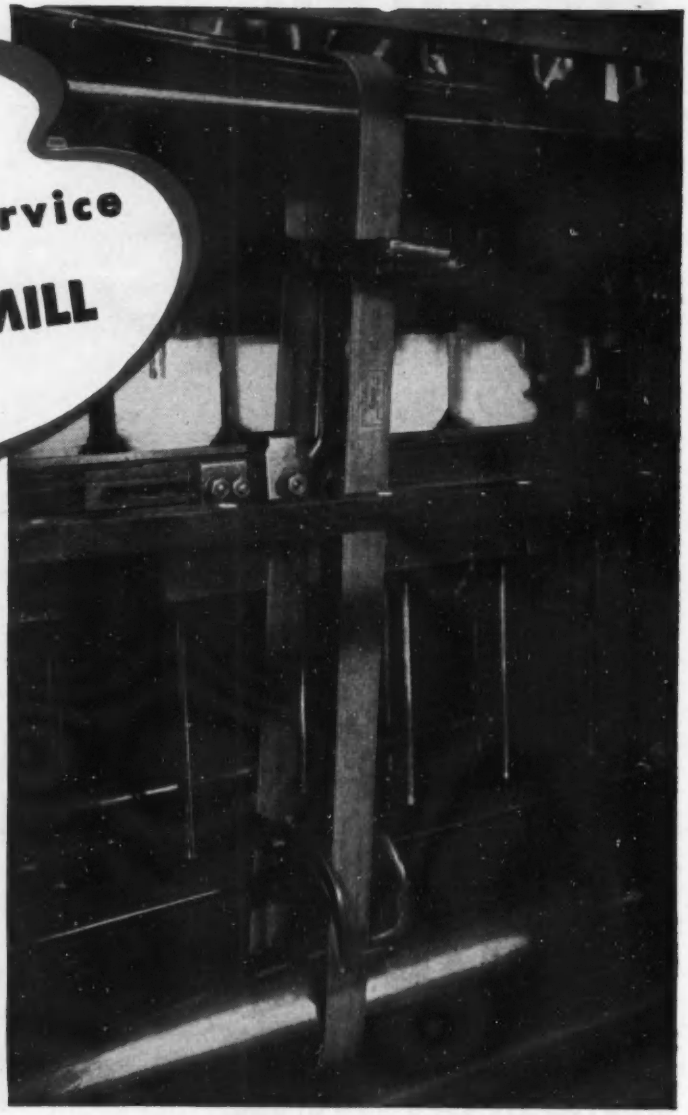
Providence, Boston, Philadelphia, Utica, Charlotte, Atlanta, Chicago, Los Angeles; Montreal, Hamilton, Canada; Manchester, England; Paris, France; Basle, Switzerland

Agents in every principal textile center throughout the world

Winding and Twisting Machinery for Natural and Synthetic Yarns

Model 10 *automatic stop motion for each end and ply*

10 YEARS of Three-Shift Service in a BUDAPEST MILL



. . . a MANHATTAN story of *Condor* CONE BELTS that outlasted previous types 30 to 1

Mr. H. M. Zilahi, Superintendent-Manager of the Goldberger Spinning and Weaving Mills in Budapest, Hungary, is a staunch believer in Manhattan quality. We quote the key paragraphs from a letter he sent to Passaic – entirely unsolicited:

"Ten years ago I visited some cotton mills in the United States and heard about the advantages of the 'CONDOR' cone belt for the flyer frames.

"The best type of our leather cone belts were running under our severe conditions (3 shifts, etc.) 3 months only.

"In 1937, we fitted therefore our flyer frames with 'CONDOR' cone belts, and now the wonder: 90% of those 'CONDOR' belts are running till now. After 10 years of running (mostly 3 shifts) they are in good condition."

Actual photograph of belt after 10 years (note brand)

During the war under pressure production, when the plant was bombed and its buildings badly damaged, Manhattan Condor Cone Belts came through to outlast the best previous types, 30 to 1. . . . And they are still in good shape, judging by the photographs that came from Budapest, (one of which is shown above).

Manhattan's line of Condor Rubber Products for the textile industry is consistently dependable—outstanding in quality and engineering. Make MANHATTAN your choice.

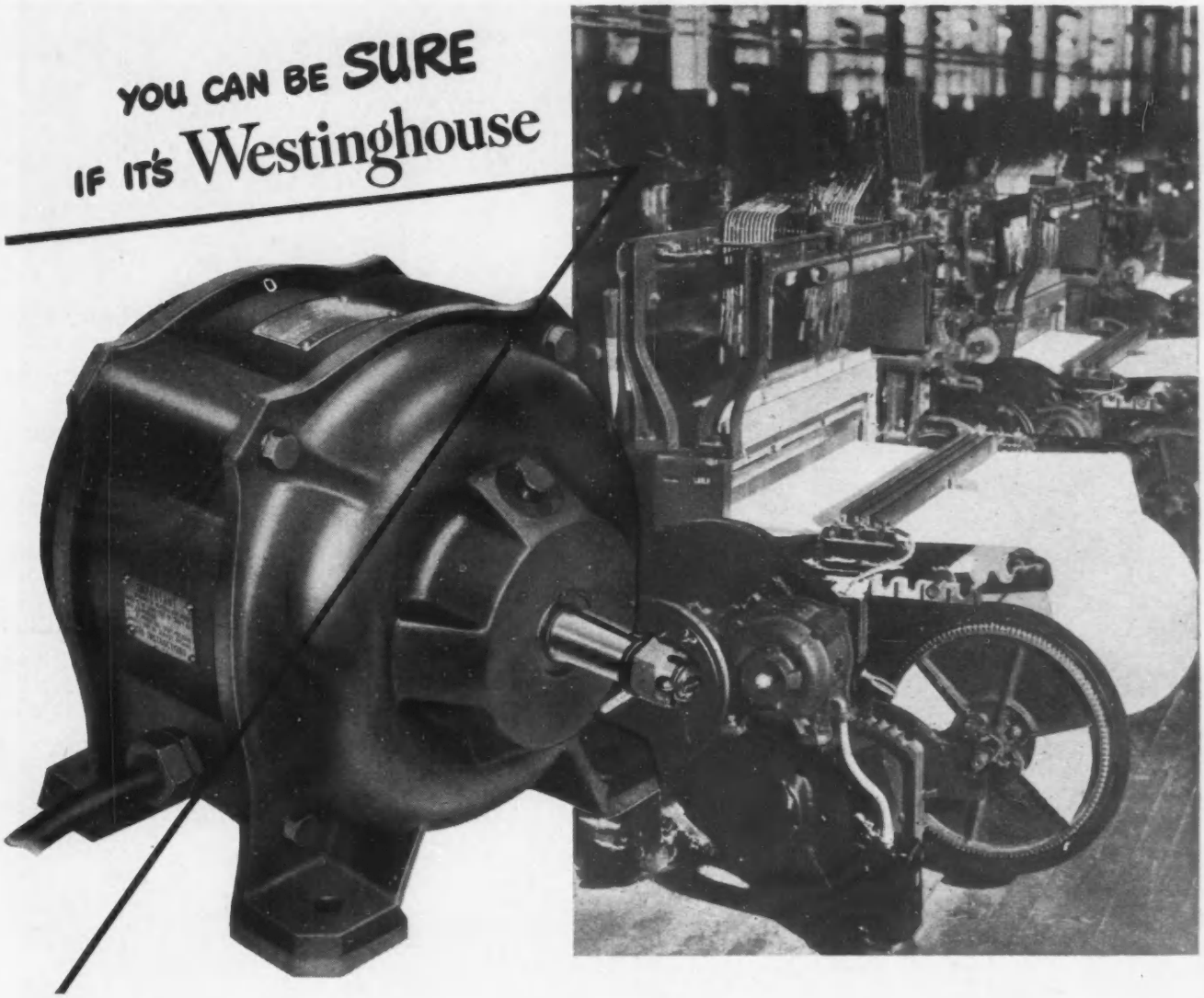
RAYBESTOS R M MANHATTAN

RAYBESTOS-MANHATTAN INC.

Keep Ahead with Manhattan

MANHATTAN RUBBER DIVISION PASSAIC, NEW JERSEY

YOU CAN BE SURE
IF IT'S Westinghouse



Westinghouse Loom Motors Are *Performance Proved*

Forty years' experience, working hand in hand with the textile industry, has shown that textile looms require motors of specialized design. So, Westinghouse, in co-operation with loom manufacturers, developed a loom motor to meet the extraordinarily severe demands made on such a motor.

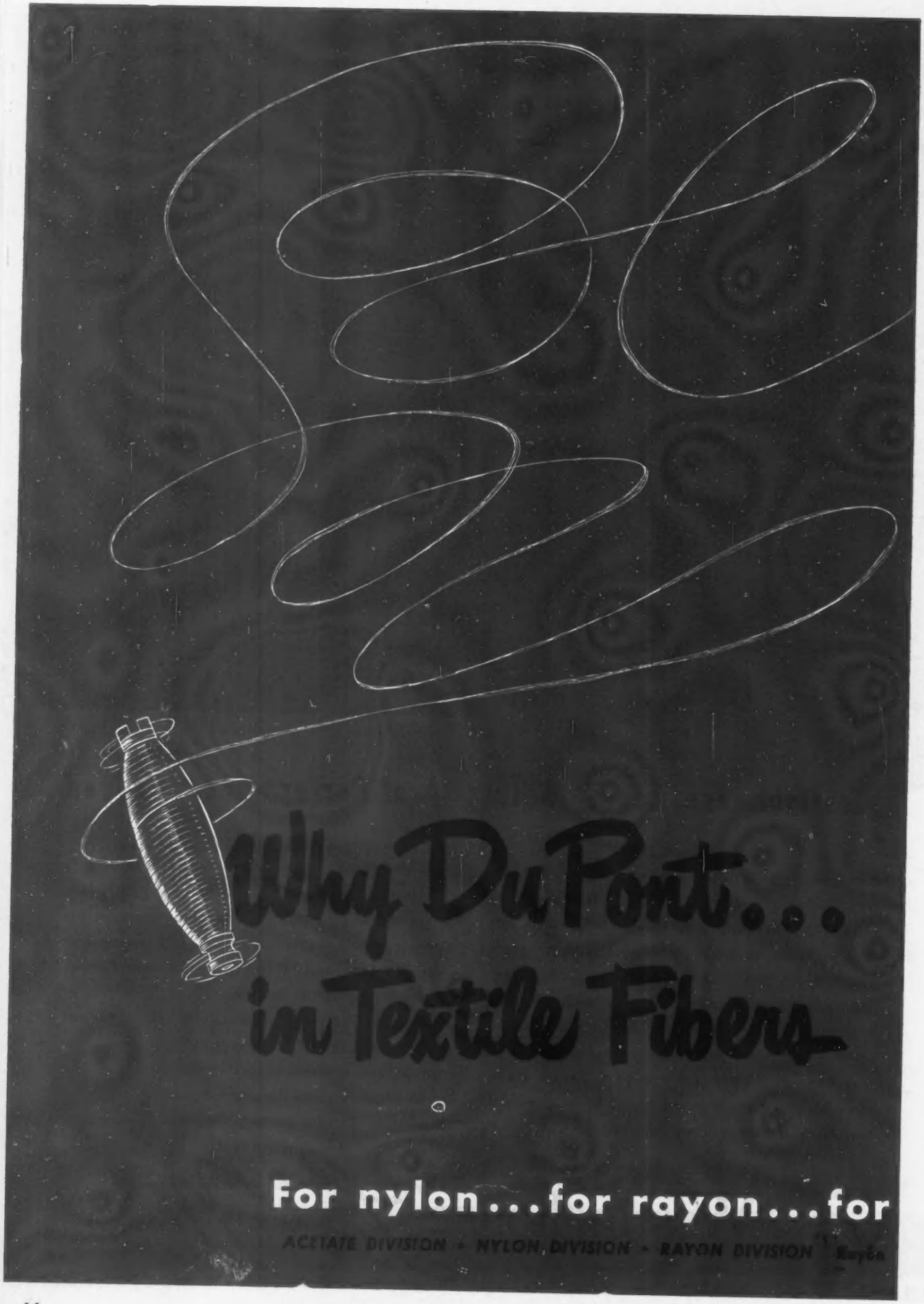
The superior performance of many thousands of Westinghouse Loom Motors has proved that they have all the features needed to assure maximum output from modern speed looms, with a minimum of energy from the line.

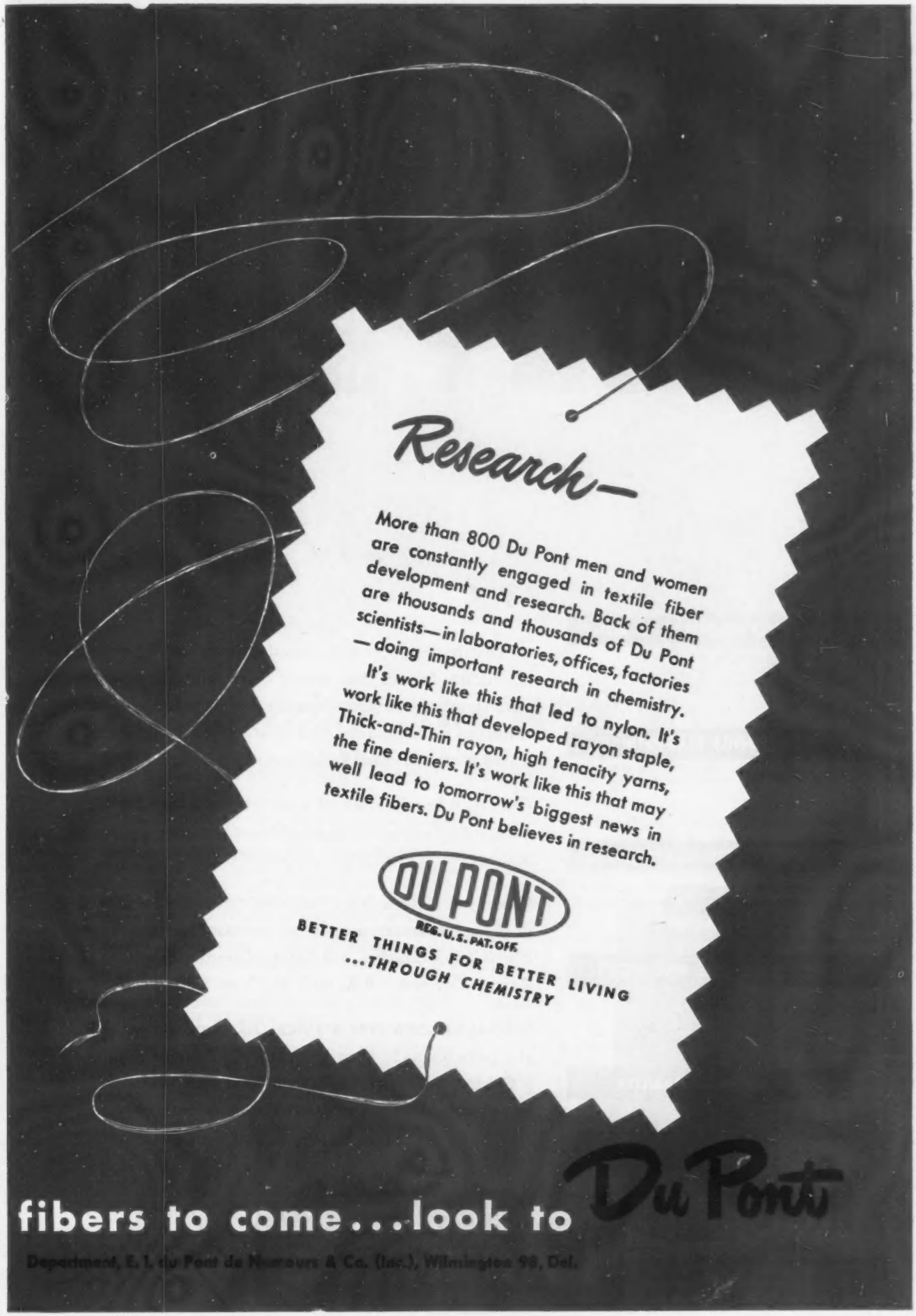
When buying new looms, be sure to specify Westinghouse Loom Motors for your protection. If you are using motors not specially designed for loom operation, you will find it will pay you to replace them with Westinghouse Loom Motors which fit any loom, new or old.

Get the facts on loom motors by asking for our new bulletin, B-3778. Address your inquiry to one of our branch offices or to Westinghouse Electric Corp., Box 868, Pittsburgh 30, Penna.

J-21491

Westinghouse
PLANTS IN 25 CITIES . . . OFFICES EVERYWHERE
Loom Motors


Why DuPont...
in Textile Fibers
For nylon...for rayon...for
ACETATE DIVISION • NYLON DIVISION • RAYON DIVISION
Rayon

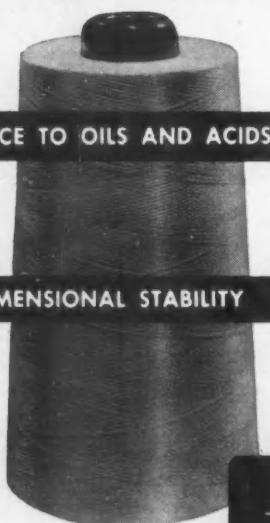

Research—
More than 800 Du Pont men and women are constantly engaged in textile fiber development and research. Back of them are thousands and thousands of Du Pont scientists—in laboratories, offices, factories—doing important research in chemistry.
It's work like this that led to nylon. It's work like this that developed rayon staple, Thick-and-Thin rayon, high tenacity yarns, the fine deniers. It's work like this that may well lead to tomorrow's biggest news in textile fibers. Du Pont believes in research.
DU PONT
REG. U.S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY
fibers to come...look to Du Pont
Department, E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Del.

FIBERGLAS* YARNS WON'T BURN

RESISTANCE TO MILDEW AND ROT

HIGH TENSILE STRENGTH

EXCELLENT ELECTRICAL PROPERTIES



RESISTANCE TO OILS AND ACIDS

DIMENSIONAL STABILITY

Textile designers and manufacturers use Fiberglas Yarns to produce fabrics that *won't burn*—fabrics that are *permanently* non-combustible. With today's emphasis on fire-safety, this characteristic of Fiberglas Yarns is tremendously important.

Plus high tensile strength—dimensional stability—resistance to oils and most acids—resistance to mildew and rot—and electrically non-conductive.

When you have a fabric problem that calls for any or all of these important properties, specify Fiberglas Yarns. For full information, ask Owens-Corning Fiberglas Corp., Textile Division, 16 E. 56th St., New York 22, N. Y.

SPECIAL LABORATORY SERVICE: To cooperate with the technicians in your laboratory, Fiberglas maintains a Customer Service Laboratory and staff. They are at your disposal on a strictly confidential basis.

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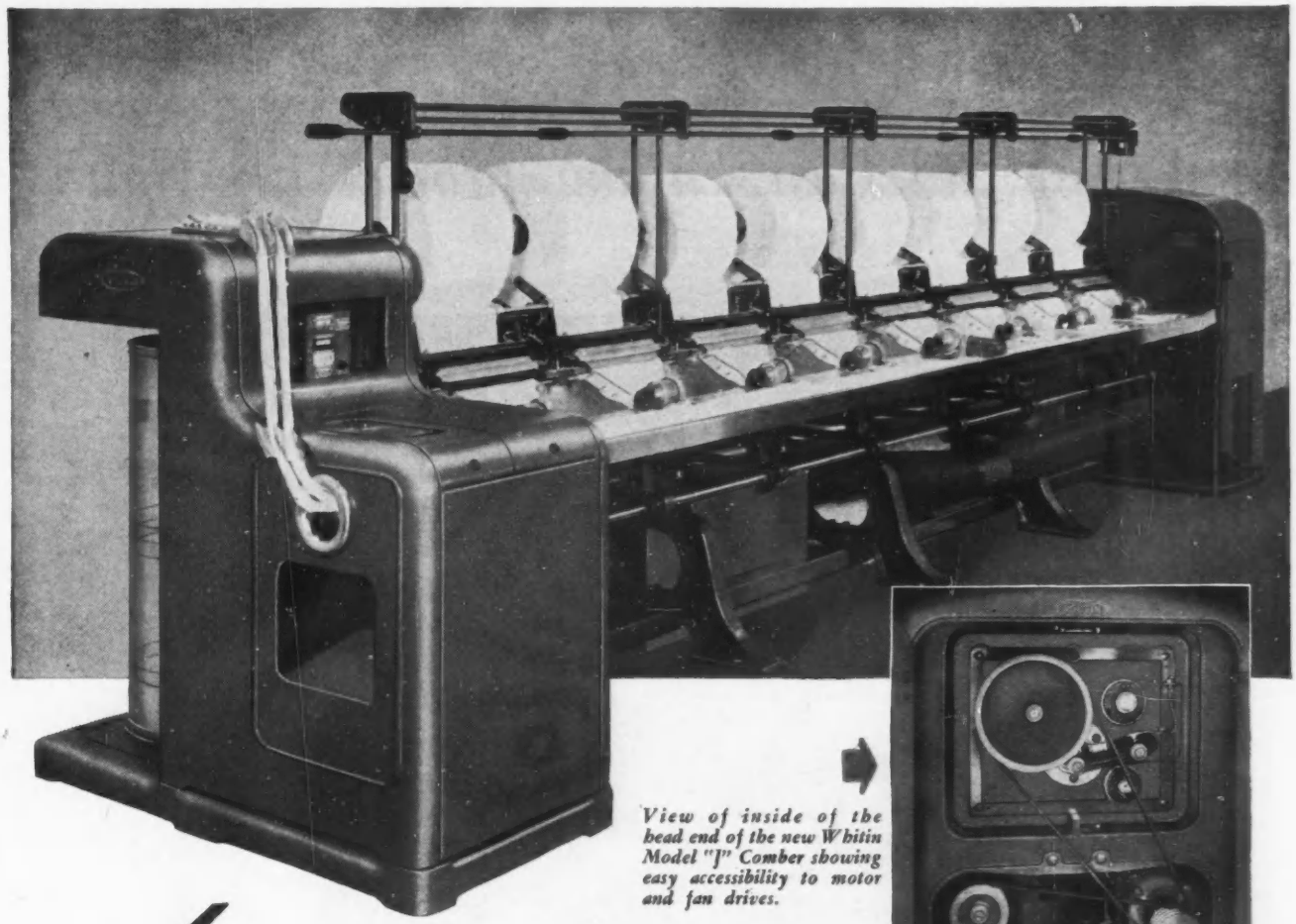
*Fiberglas is the trade-mark (Reg. U. S. Pat. Off.) of Owens-Corning Fiberglas Corporation for a variety of products made of or with glass fibers.



View of inside of the head end of the new Whitin Model "J" Comber showing easy accessibility to motor and fan drives.

Announcing.. the NEW WHITIN Model "J" High-Speed COMBER

The new Whitin Model "J" eight-head, high-speed comber represents a major advance in the complicated art of combing. Production speeds heretofore thought to be impossible have been reached, yet the combed sliver produced is distinctly superior in quality. Many features of earlier combers which have been successful in mill operation have been retained and undesirable features have been eliminated. Sound engineering principles, modern streamlined design and precision construction combine to produce an entirely new comber that will be received with enthusiasm by all mills manufacturing quality combed yarns and by the textile trade in general.

Among the many innovations and improvements which distinguish the new Model "J" Comber are:

Increased Production — 150 Nips per minute. By the use of a new cam and gearing organization for operating the detaching rolls, an increase of 27% in speed of the combing cycle has been gained. On a long mill test, extending over a period of a year, [illegible] comber produced an average of 34 pounds per hour, together with a substantial reduction in neps.

Completely Enclosed Head and Foot Ends. Motor and fan for the aspirator, installed in head end, are free from dust and lint accumulation. Rounded off corners and wide swinging doors permit ease of cleaning, ready accessibility to every assembly, and reduction of accident hazards.

Bi-Coil Coiler. A 14" coiler can carried on a can table that receives a circular but non-rotating motion now takes two slivers instead of the usual one. Slivers are smoothly coiled, free from twist insertion, easily separated when being fed to the drawing frame. Reduces number of cans needed in drawing process by 50%.

Wider Draw Box. Width of draw box increased to 9½" insures better drafting of fibres.

You'll find the new Whitin Model "J" Comber a worthy addition to an already famous line of textile machines—a notable example of quality machinery built for long service and profitable performance.

A completely illustrated folder describing the new Model "J" Comber is now being prepared and will shortly be ready for distribution. Write for your copy today!

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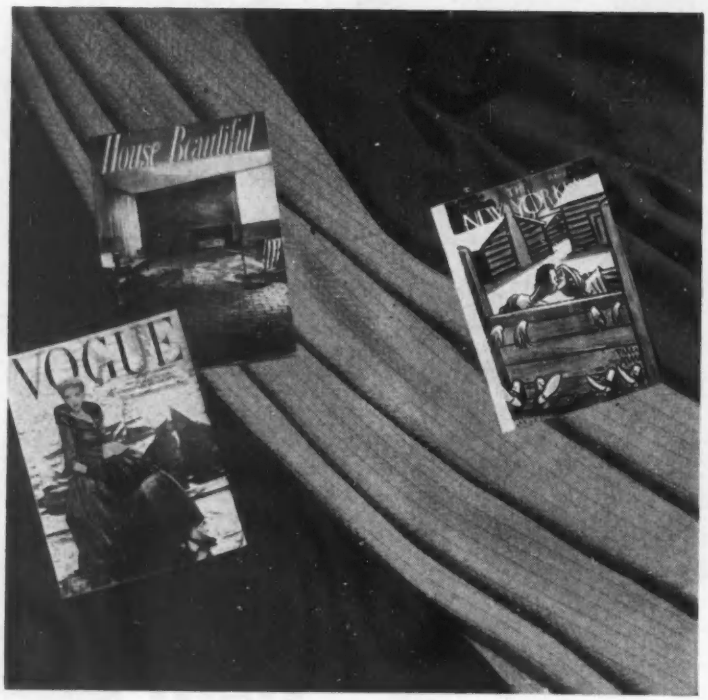

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give your old frames that new look

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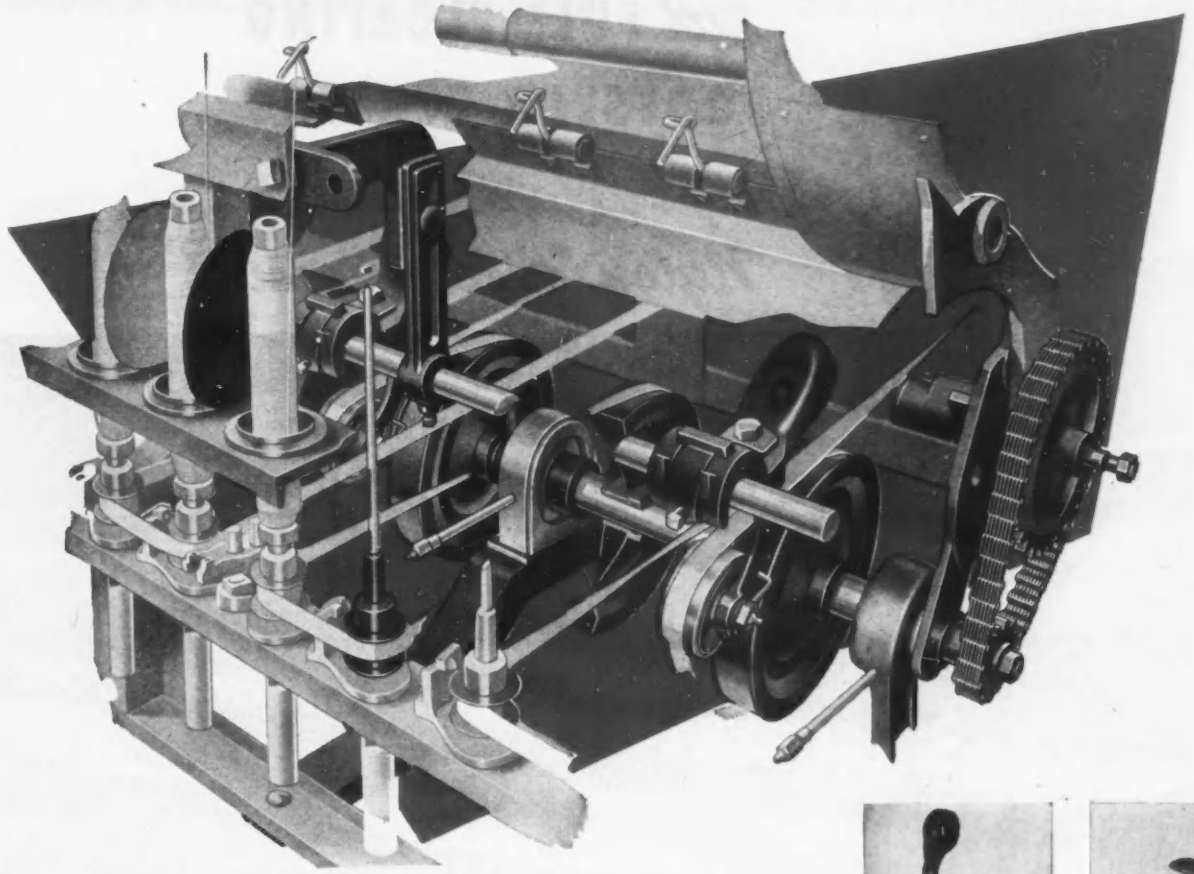

B-205

B-212-R-213

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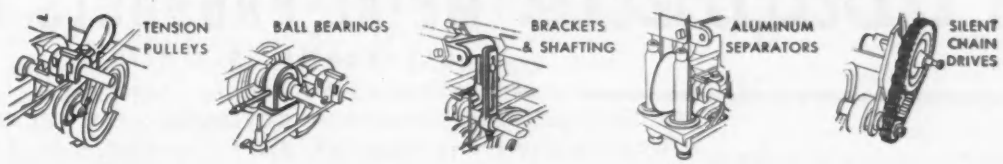
● The present cost of new frames, plus the natural desire to improve and utilize existing equipment, has prompted many mills to modernize their old frames, (either band-driven or old style tape-driven) with *Meadows Conversions*... Consisting of silent chain-drive; individual driving pulleys; high-strength ground and polished shafting (mounted on heavy duty ball bearings); ball bearing tape tension pulleys, and light weight solid aluminum alloy separators—a Meadows Conversion means less vibration, low power consumption, uniform speed and twist, fewer ends down, and *no more cylinder trouble!*... We engineer and service each installation, manufacture all parts, and will be glad to have our representatives survey and estimate your frames without obligation, in their respective territories. *More than 8 million spindles equipped with Meadows Ball Bearing Tension Pulleys.*

MEADOWS MODERNIZERS



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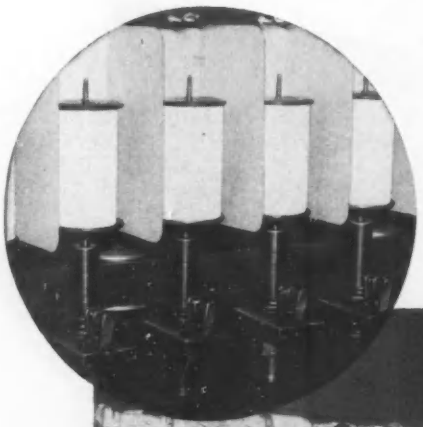
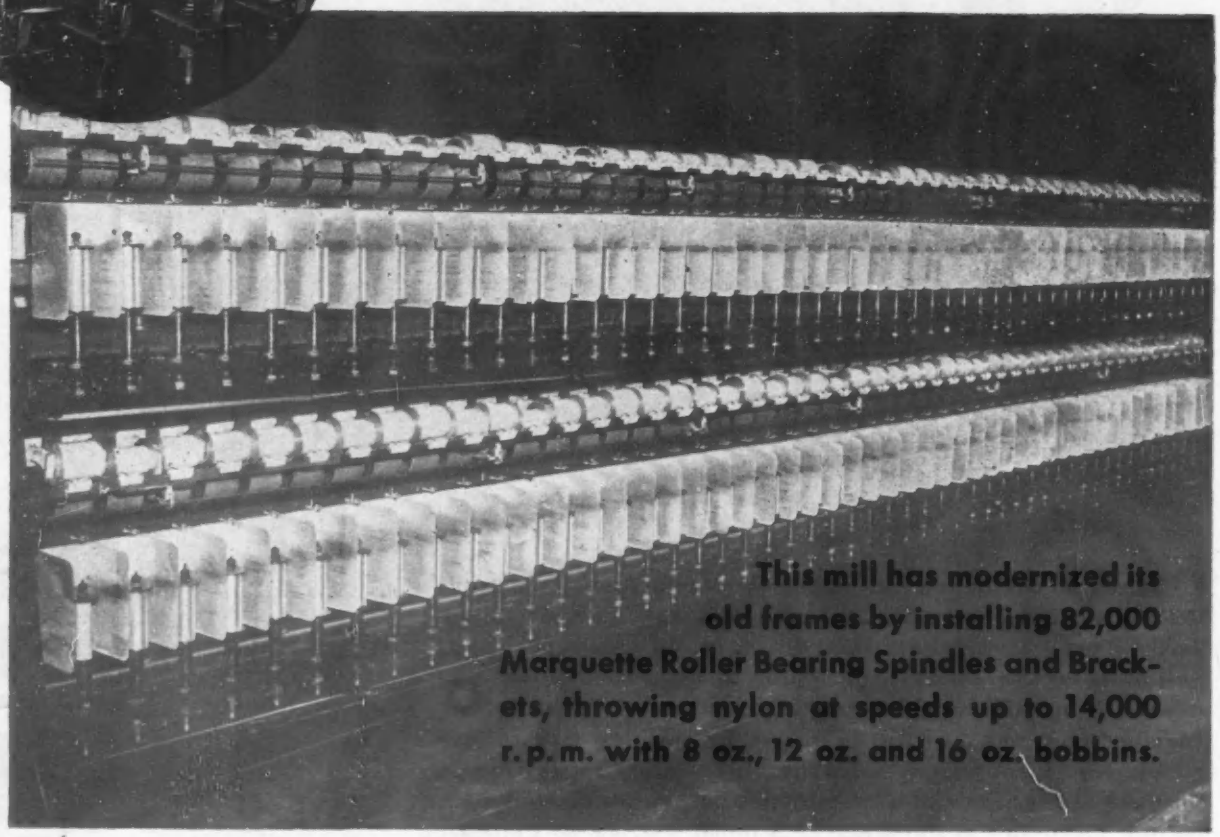
Marquette ROLLER BEARING SPINDLES *with* FULL-FLOATING FOOTSTEP BEARING

For Cotton, Rayon, Nylon, Wool, Worsted





This mill has modernized its old frames by installing 82,000 Marquette Roller Bearing Spindles and Brackets, throwing nylon at speeds up to 14,000 r. p. m. with 8 oz., 12 oz. and 16 oz. bobbins.

Marquette Roller Bearing Spindles can be obtained by all frame builders. Specify Marquette Spindles when you order new frames.

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Vol. 113
No. 1

Textile Industries

JANUARY
1949

The Economic Outlook

THE BLUSH seems to be definitely off of this boom. As far as the textile industry is concerned, the boom seems to be quite over and the hard realities of life under a competitive system are now being faced.

There are many noticeable signs here and there of a general slackening in the previous frantic pace of business. The hotels do not seem to be as crowded, and the trains are running with empty seats and berths. Here and there are notices of lay-offs in industries other than textiles.

Whereas a year ago haberdashers were doling out shirts one or two at a time, and many other things could be bought only by appointment, you could now get a truckload of practically any such goods without having to wait for delivery. Some manufacturers are canceling orders for quantities of steel and other recently scarce materials, and a lot of ambitious building plans are being scrapped. Of course, most industries are still riding the crest, but a crest can be quite high just before swift recession sets in.

It was this way in 1929, when the early winter saw business at almost unprecedented heights, while late fall found us well into an acute depression.

Another disastrous depression has been impending for about ten years. Preparation for war, and war itself, staved off a precipitation of this depression and resulted in a great deal of needless extravagance to make the depression worse when it finally comes.

The postwar boom has been fueled by the inflation of the war. Most of that inflation has now been compensated for by advanced prices, and it looks very much as if the time has come when the boom can only be sustained by more inflation. There is going to be terrific pressure for this when payday for the economic follies of the past 15 years is finally upon us.

The results of the November election seemed to indicate more than any other single thing that a majority of the people were contented with "inflationary prosperity," and that if a depression is impending, they would like to have it impend a while longer. Practically everyone is in favor of inflation, but almost no one will willingly suffer its consequences.

We love to dance, but hate to pay the piper. Unfortunately, the piper is sometimes possessed of irresistible power for enforcing payment.

Whenever we think of this current period as being one of prosperity, let's never forget that our national debt amounts to over $1700 apiece for every man, woman, and child in the country. On top of this must be imposed the various state and municipal debts, so that a typical family of five persons is in hock for well over ten thousand dollars on account of public debts alone. The chances are excellent that this same family of five also has about all the personal indebtedness that it can stagger under without having to take care of financing the ten thousand dollars of public debt.

The results of the November election seemed to indicate that a majority of the people were contented with "inflationary prosperity." Practically everyone is in favor of inflation, but almost no one will willingly suffer its consequences.

EARLY in November, the CIO issued a notice that further wages in the textile industry would be demanded immediately. Since the textile industry, generally, is in rather unfavorable condition today, it may be that this clamor for a wage increase is just to establish a bargaining position, to offset any requests for wage reductions. It is a little difficult to see how an industry which obviously is working hard to keep out of the red can be expected to increase wages at a time when its customers evidently feel that they are too high already.

The CIO has also served notice that automobile workers' wages must be increased, and of course if the workers in these two leading industries have their wages jacked up, there will be innumerable other wage increases. Maybe this will be all that is needed to start the first-class depression that is in store for us.

It is almost impossible, however, to prophesy with any accu-

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racy the end of a boom, because the boom itself is dependent upon the actions of human beings, who are very unpredictable creatures. Just as a boom could logically be expected to peter out, some unexpected development may give it another push that will keep it going for some while. This was very noticeable in the Early Twenties.

The boom following the First World War had just about faded out when the automobile industry and the road building fever combined to get it going again. Beginning about 1922, several billions of dollars a year were poured into automobiles and new factories for producing them, and in the construction of highways. These expenditures not only created a vast amount of real wealth, but at the same time, a very considerable amount of inflation.

Just after the Civil War, when the normal postwar boom was about ready to fold up, there was a tremendous amount of railroad building, with all of the economic developments that went with the extension of railroads.

Now, after the Second World War, we have not yet seen any one single new thing which would generate a boom comparable to the railroad boom of the Seventies, or the automobile and road building boom of the Twenties. The current boom seems to be based almost entirely on the currency inflation created during the late war, and it looks very much as if most of this inflated currency has now found its way out of the hands of the original recipients into those of bankers or investors.

There was a somewhat plaintive report issued by the CIO in early November to the effect that millions of American families had been forced to use all of their savings, and that between five and six million of them had cashed their last United States Bonds. This report added that the share of savings held by the top 10 per cent income bracket class has risen from 46 per cent in 1945 to 77 per cent in 1947, and that while this rise was going on, some 13,500,000 families had used up about eleven billion dollars in savings, and another four million had no savings or credit standing on which to draw.

The textile industry seems to be in for a long normal spell of tough competition, and the mills with the best equipment and the lowest costs will survive.

If there is any group in the United States which has had more to do with this condition than the CIO, it must be the A. F. of L., because both of these organizations have been insistently pushing up the cost of living as industriously as they possibly could ever since the war ended. We are now given to understand that there will be another vigorous push shortly.

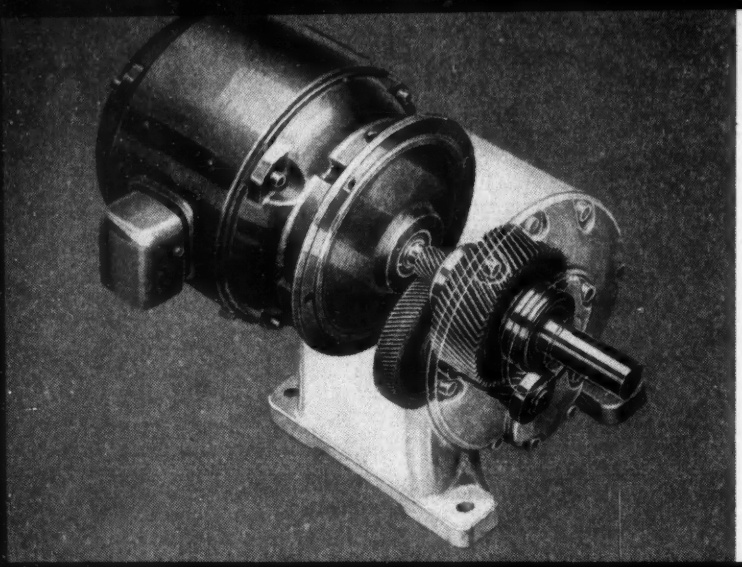
There is, however, a definite economic limit to the amount of this sort of pushing that can be done. The textile industry seems to have reached that limit. Some mills have been liquidated; others closed down indefinitely, and others are running short time with the possibility of indefinite closure. This condition has been brought about by the mills catching up with the demand for goods, and as other industries completely catch up with excessive demands for their goods, they are going to find themselves in the same fix as textiles.

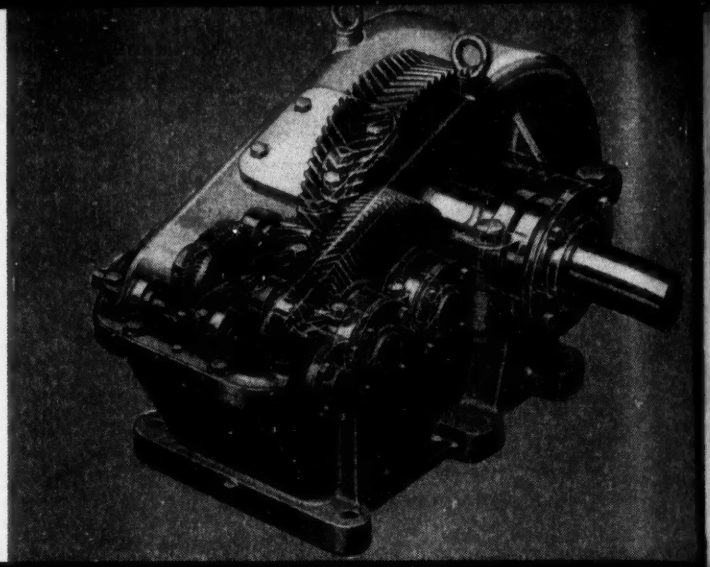
Even the automobile industry, with its bloated backlog of orders, may suddenly find itself in a highly competitive market. As other industries begin to work shorter hours and employ fewer persons, there will be less demand for automobiles, and as soon as something happens to impel the automobile black marketeers to dump their huge stock of cars, the automobile manufacturing industry may find itself shorn of its backlog. There must be several hundred thousand new automobiles sitting around in secondhand dealers' lots all over the United States, waiting for some sucker to pay a $500 to $1000 premium to get a car. If, and when, these cars are dumped, this is going to make a tremendous difference in the delivery positions of the factories.

When this boom really begins to crumble it can crumble fast, and millions of persons who have been accustomed to having their wages raised almost upon request, are going to take a very dim view of unemployment and curtailed incomes. For 15 years they have been expecting the government to invoke some magic charm for remedying a condition of this sort, and they will certainly look to the government again. The government of course has never had any magic charm; it has only had recourse to inflation and more inflation. Maybe it will again have recourse to this same quack remedy.

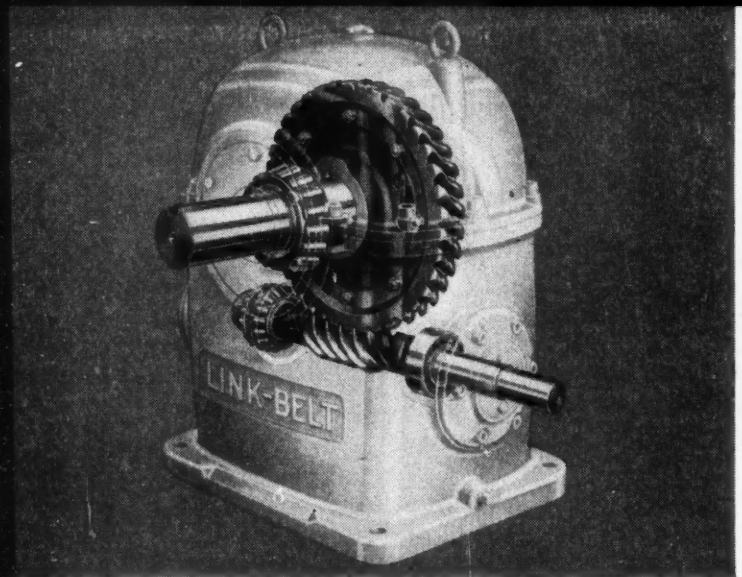
We see in the immediate future nothing that could reasonably be expected to give a boost to the late lamented boom in textiles. We seem to be in for a long normal spell of tough competition, and the mills with the best equipment and the lowest costs will survive. Maybe the boom can continue for some time yet in other industries. It did between 1920 and 1929, when the textile industry was in its worst depression and the rest of the country was on a fantastic boom. Unless, however, something not now in view stimulates a tremendous capital outlay, it looks very much as if this current boom had just about spent itself, and that all industries will soon be in just about the same position as textiles.

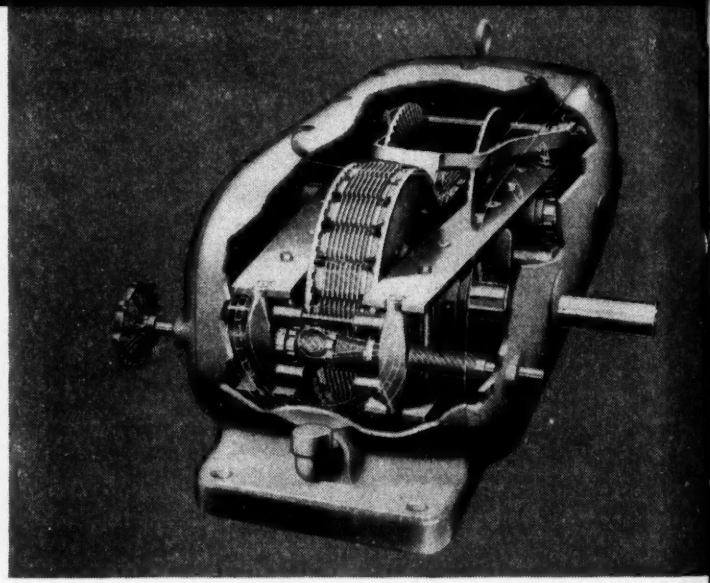
If this were a credit inflation like the one in the Twenties, and the national debt were of manageable proportions, there might not be too much to worry about. But this is not a credit inflation; it is a monetary inflation. And when millions of people have been deluded into thinking that a monetary inflation can create prosperity, it is reasonably certain that they are going to put up a terrific howl for more of the same medicine when they begin to feel the first serious onset of economic illness.





is Speed Reduction Your Problem?





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"THE COMPLETE LINE"

NEWS in BRIEF

Fieldcrest Announces Peacetime Military Service Policies. Policies of Fieldcrest Mills, with plants in North Carolina and Virginia, have been announced with respect to peacetime military policies. In addition to fulfilling all requirements under the law, Fieldcrest will continue group life insurance policies with the employee's part of the premium being paid by the company; full discount privileges will be retained by such employees and their dependents; when accepted for service each employee will receive two weeks' additional pay.

Bare Beach Cottons. Cotton bathing suits with a very bare look will be the seaside story at resort beaches in 1949, according to an authority on this subject. They are brief as possible, drawn high on the hips and bare-shouldered with boned and elasticized bra tops. They hug the figure—swathed like diapers after the French fashions or in brief Bikini suits. Or they are wrapped like turbans about the figure. They fit the figure snugly in the tubular fashion. They follow the Empire silhouette of street wear. They have the Directoire feeling with skirts in princess styles. And they feature in contrast the little-girl full-skirted look so popular last season. Almost all bathing suits are strapless, but they come with detachable straps that can be buttoned on if desired.

Executive and Technician Job Status. A year ago textile mills were paying premium prices for technicians, trained or fresh from college, and supervisors could readily step from one job to another without loss of pay. In recent months the job market on higher supervisory personnel has tightened, and men who recklessly left jobs remained without them for long periods. Though trained technicians are still in demand, mill men having good paying positions are holding onto them rather than letting slight differences of opinion cause them to resign.

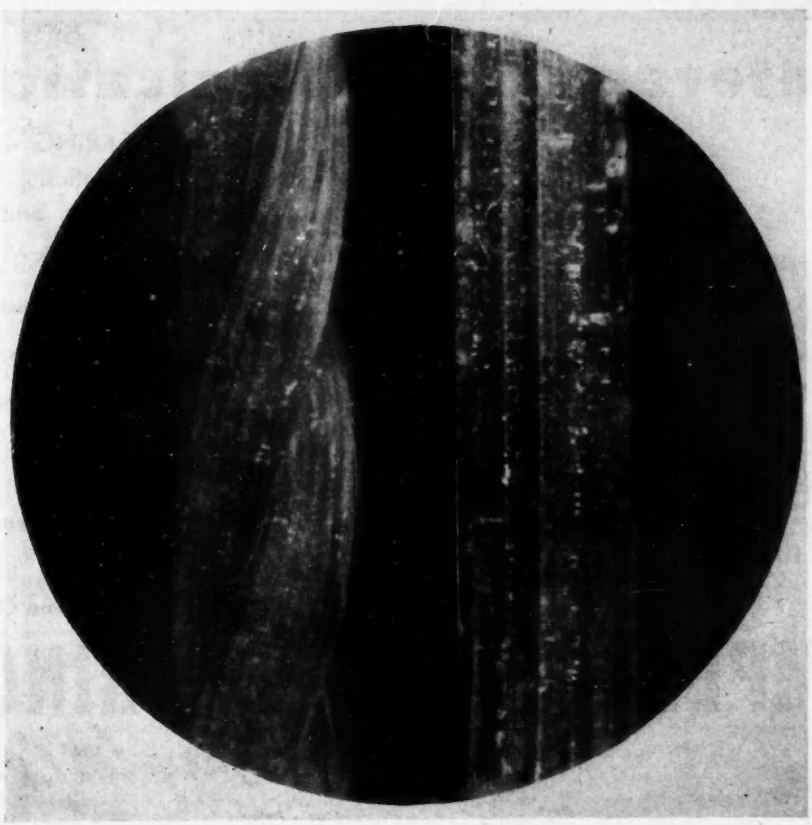
Business Training and Textile Training. The Society for the Advancement of Management has completed a two-year study, polling 5,000 business men and 500 teachers on their opinions as to what subjects best prepare students for such a career. The survey showed divergence of opinion between the two groups. Of 44 subjects on which they were polled, only four were deemed essential by 60 per cent or more of each of the two groups.

Business men considered as important the subjects of sales promotion, public relations, and budget control. Teachers emphasized

THIS IS "NYMO"

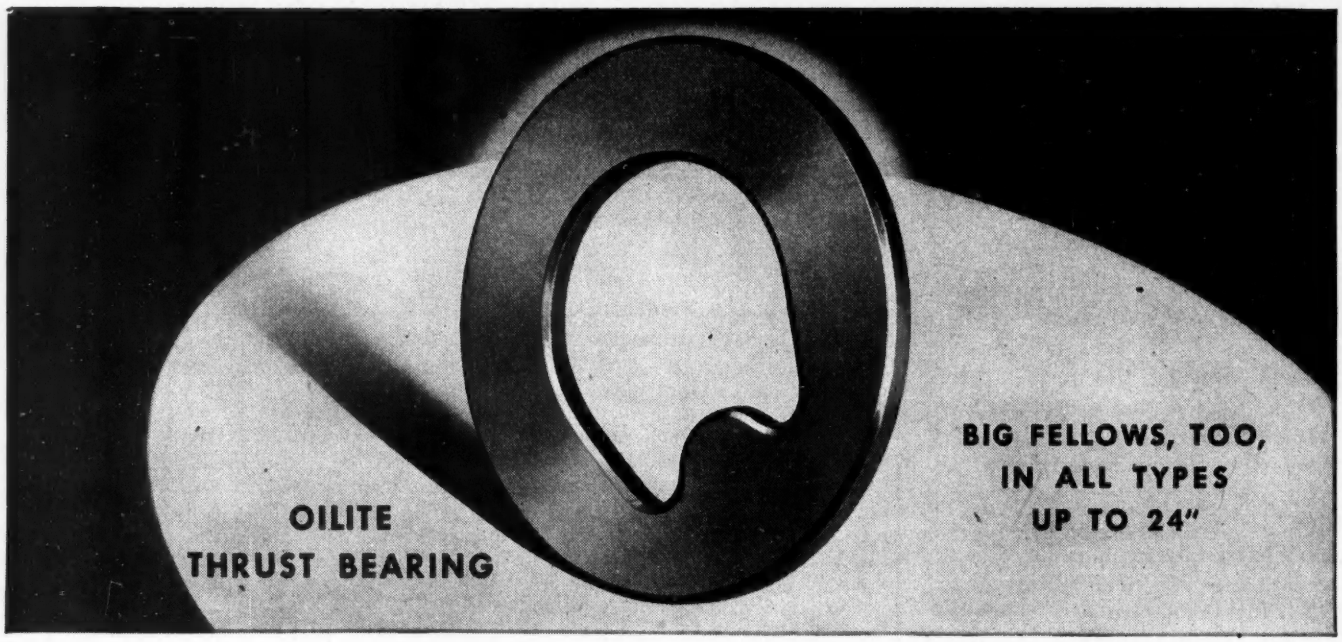
The photomicrograph on the left shows conventional twisted nylon sewing thread, and the one on the right is "Nymo," a monocord nylon developed by the research laboratories of Belding-Corticelli. Its fineness (diameter) is said to enable finer needle work with less perforation and sewing into cloth. Strength of the yarn will eliminate double stitch sewing, according to the company.

It is made of an untwisted bundle of nylon fibers which have been so welded together that they form a thread of one cord with all the properties of the original fiber from which it is made. Details of manufacture were not available from the company.



OILITE

OIL CUSHION — HEAVY DUTY BEARINGS



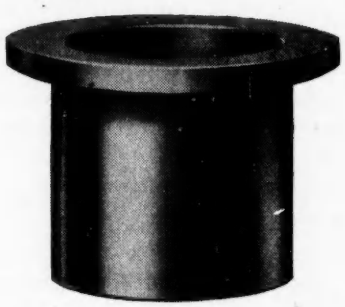
Metered, Self-Lubrication, No Waste

OILITE—The HEAVY DUTY OIL CUSHION BEARING with Reserve Capacity.
OILITE operates under the principles of hydraulics.
OILITE is a precision product and permits lower bearing clearances.

PLAIN SLEEVE

OTHER ADVANTAGES INCLUDE:

- Every bearing is an engineered product.
- Oilite bearings can be assembled and the bore finished simultaneously—reducing costs.
- Ferrous and non-ferrous, oil cushion bearings.
- No blow holes or other flaws.
- Production tools on hand for over 18,000 different types and sizes.
- Large research and engineering staff.
- Complete engineering service.
- Greater plant facilities.
- Over twenty (20) years of powder metal know-how.
- Representation in every state and Canada.
- Oilite bearings are not expensive.



FLANGE

Send your blueprints to Amplex Field Engineer or the Home Office. Address Dept. M.

AMPLEX MANUFACTURING CO. DETROIT, 31 MICHIGAN

Division of Chrysler Corporation

FIELD ENGINEERS AND SUPPLY DEPOTS IN PRINCIPAL CITIES

statistics and business law. Both groups favored English composition, literature, and public speaking.

In the textile industry agreement is difficult to reach between educators and mill men, or between mill men and mill men, as to what should be taught in the textile schools. Staffs of textile schools are limited, and each branch of the textile industry advocates certain specialized training, in many instances this training being suggested based upon the immediate needs of the mill at the moment.

In open forum sessions the textile industry has been called upon to compete with the oil and steel industries in attracting mechanical and chemical engineering graduates to textiles, and the textile schools have been advised to stop trying to make machine operators of the students.

Nylon Sweaters. Nylon sweaters have been growing in popularity. Heretofore overshadowed by inadequate yarn supplies, knitted outerwear manufacturers have taken up production of nylon sweaters as more yarn became available. Washability, soft texture, moth resistance, quick drying properties, and other assets have established nylon sweaters as staples for fall and spring. Crimped, nylon staple is the raw material.

Urge No Ratification on Havana Charter. The American Tariff League has adopted a resolution which states that the Havana Charter contains features that are contrary to the public interest of the U. S., and urges Congress not to ratify the charter for an International Trade Organization nor to permit participation in or adherence to it by this country by any means or method other than that of ratification by the Congress. In the event that renegotiation of the charter is not feasible, it is suggested that the U. S. should seek to conclude bilateral agreements with as many nations as are willing to agree on principles to which this country adheres.

Plastics Make Progress. Speaking before the American Association of Textile Chemists and Colorists, J. R. Price of Bakelite Corporation reported great strides being made by plastics, many of which replace textiles, and others which augment textiles.

Extracts from Mr. Price's address follow:

"Today the production rate of the whole industry in plastic film alone is 15,250,000 square yards per month . . . seven years ago, in 1941, this production rate was only 40,000 square yards per month. The important role that color has played in this production can be seen from the fact that seven years ago 80 per cent of film produced was clear, whereas today at least 40 per cent is in color.

"Two years ago 90 per cent of rainwear was clear; today this situation is almost completely the reverse so that 95 per cent is in color.

"New developments will not only extend the supplanting of textiles by plastics, but will also augment textiles. For example, plastic material can be covered with flock to produce a type of velvet. Thus plastics will not only grow in use by themselves, but in combination with textiles, creating a wholly new market.

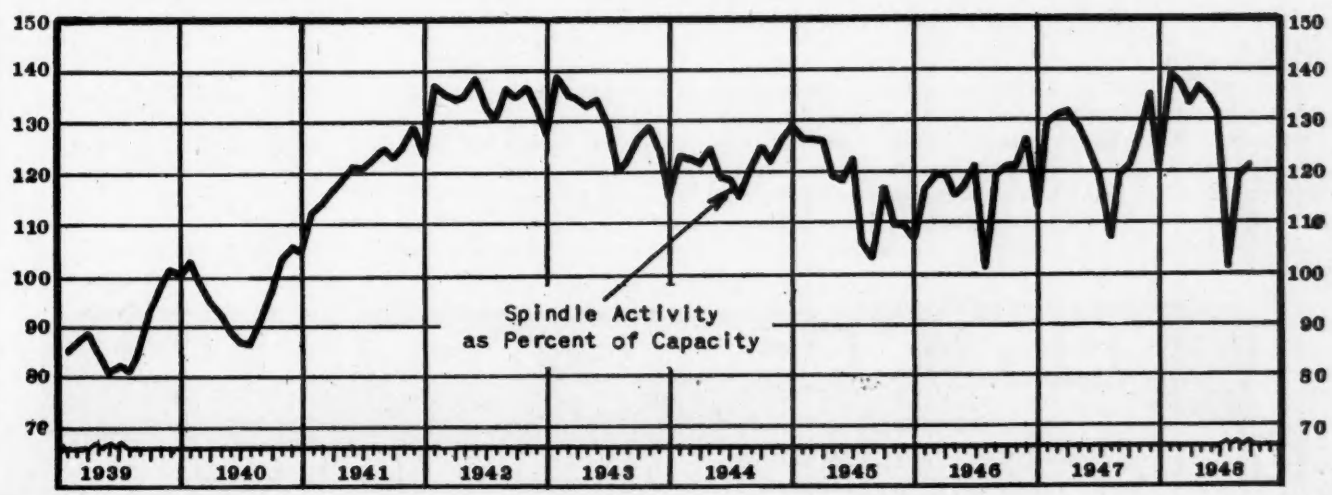
"In addition, the development of resinous or non-migrating plasti-

---

COTTON SYSTEM SPINDLE ACTIVITY

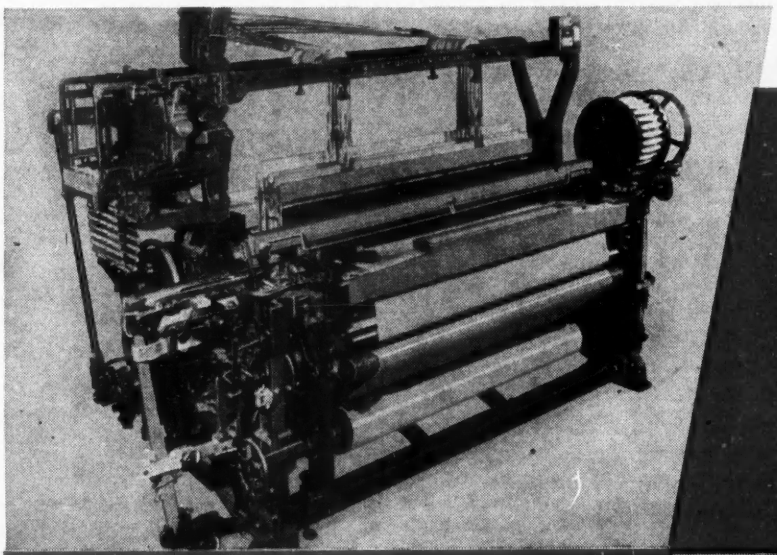
Per Cent of Capacity Based on 80-Hour Week

This spindle activity chart, prepared by CTI from Dept. of Commerce figures shows the brief recession in the industry during 1948. New-comers in textiles expressed concern. Old-timers knew that it had happened before and corrected itself. The opinion has been expressed that the industry can talk itself into recessions. Notice quick snapbacks after drops.



these new HUNT LOOMS

SPEED PRODUCTION! LOWER COSTS! IMPROVE QUALITY!



THE HUNT RAYON LOOM

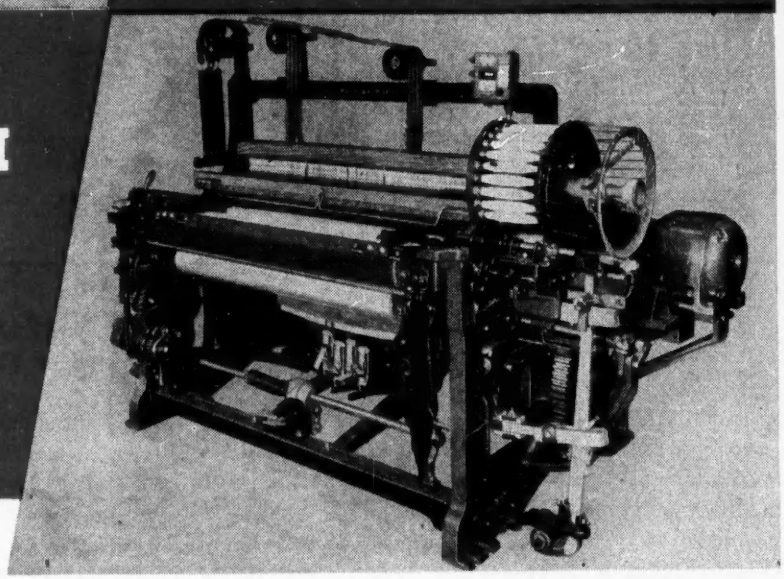
MODEL HX-100

Provides smooth, steady operation at higher speeds than other makes. Heavier loom sides and new improved type Hunt Spreaders make the Hunt Rayon Loom more stable, with fewer breakdowns and reduced maintenance costs. Made in sizes to weave rayon and silk fabrics up to 60 inches wide.

THE HUNT COTTON LOOM

MODEL HX-1

This new, faster cotton loom is equipped with latest improved Hunt Spreader and heavier loom sides. More bearings, greater stability, and higher cloth output are reasons why the HX-1 Cotton Loom meets present day production needs more acceptably. Cloth widths up to 60 inches.



CONVERSION FEATURE—HX-100 Rayon Looms and HX-1 Cotton Looms are so constructed that at small expense they can be converted from rayon to cotton weaving, or vice versa—from shallow loom to deep loom. Double bearing pads built into the loom sides permit moving crankshaft and camshaft assemblies to provide more harness space or more loom beam space. The Hunt Looms are so substantially built they can be used to weave practically any fabric. Both looms will accommodate loom beams up to 28-inch diameter heads.

Write today for illustrated folder giving complete details and specifications for HX-1 and HX-100 looms. Prices and delivery details on request.

HUNT MACHINE WORKS, Inc.

200 ACADEMY STREET TELEPHONE 2-5681

GREENVILLE, SOUTH CAROLINA

cizers for plastic film formulation will take up almost an entire field. They will become important in the manufacture of table covers and other related applications."

QM Progress on Production Survey. In the development of the Quartermaster Corps' industrial mobilization program, production facilities surveys have already been completed covering some 2,000 plants throughout the country. Approximately 8,000 other plants—all potential manufacturers of critical QMC items—are scheduled for such surveys in the future.

Charles A. Cannon, president of the Quartermaster Association, reports that he is greatly encouraged by the whole-hearted participation by textile industry members in the work of the Quartermaster Association. Mr. Cannon has expressed the opinion that such participation affords the best possible opportunity for industry to constructively help in the shaping of industrial mobilization plans, to the mutual advantage of themselves and the government. He urges full cooperation of all suppliers with the Quartermaster Corps in the development of the overall industrial mobilization planning program.

Unique Approach. Textile Information Service and "True Comics" have cooperated to bring the history of the textile industry to literally thousands of children (and quite a number of adults, no doubt). From pictures, drawings and data furnished by the Textile Information Service, "True Comics," the educational comic magazine for children, in its October issue, has published an interesting pictorial history of the cotton textile industry as another in its "American Adventures in Industry" series. In this novel manner the true story of the cotton textile industry has been brought to countless future citizens, many of whom live far from the textile manufacturing areas.

Delay in FTC Wool Shrink Control Needed. The National Knitted Outerwear Association (Committee on Shrink Resistance) has suggested deferring of FTC proposed fair trade rules governing the sale and promotion of wool shrink resistant compounds and products treated with these agents. Reasons offered are (1) Need for a standard acceptable method of washing sweaters and other knitgoods and (2) development of a standard method of measuring shrinkage in knitgoods.

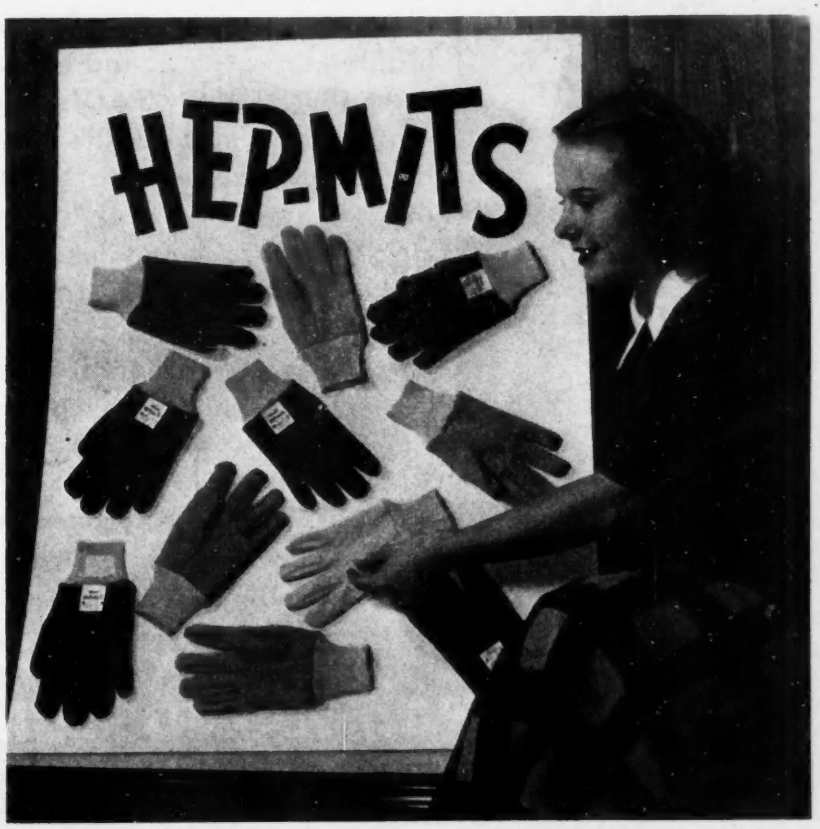
National Cotton Week May 9-14. National Cotton Week in 1949 will be observed during the period of May 9-14, one week earlier than usual. The change came about as a result of a poll of retail opinion which unanimously favored the earlier date.

NAM Suggests Federal Budget. The National Association of Manufacturers is recommending that Congress adopt a maximum Federal budget of 37 billion dollars for the fiscal year beginning July 1, 1949. This is three and a half billion dollars below expected expenditures for the current fiscal year.

The NAM also suggests the segregating of expenditures connected with past or possible future wars from those connected with the ordinary business of government.

THEY CALL THEM HEP-MITS

Peggy Ann Garner, seventeen-year-old star of William Moss Productions whose picture "The Big Cat" is soon to be distributed by Eagle Lion Films, examines a display of the "new look" knit jersey gloves which she designed and named. They are called Hep-Mits and are being distributed nationally by the Riegel Textile Corporation [Teen-age jitterbugs are called Hep-Cats, or so we're told]. The gloves are available in a whole range of brilliant colors and are well on their way to becoming a national fad among teen-age boys and girls.



GOING AT *10,400 RPM*
YET IT'S STANDING STILL

WITH the STROBOTAC this is exactly what a spindle looks like when it is revolving at any speed from *600* to *100,000* rpm. For the maintenance of correct and uniform spindle and traveler speeds the STROBOTAC is ideal. It requires no mechanical or electrical connection to the parts being checked . . . it is simple to use . . . portable . . . light-weight . . . highly accurate . . . and can be operated by anyone.

As the STROBOTAC's flashing beam of light is pointed at a spindle the speed dial is turned until the spindle appears to be standing still. The dial then reads rpm directly. Move to the next spindle and if it, too, seems to stand still both are travelling at the same speed; if not, adjust until it is still. That is all there is to it.

For accurate speed checks of spinning and twisting spindles handling cotton, rayon, worsted and silk . . . for speed measurements on rayon buckets . . . for studying loom shuttle operation . . . the STROBOTAC has proven an invaluable tool in hundreds of mills.

Let us tell you how it can help you.

WRITE FOR "THE STROBOTAC BULLETIN"

TYPE 631-B
STROBOTAC $125.00

GENERAL RADIO COMPANY
Cambridge 39, Massachusetts

New York **Chicago** **Los Angeles**

AN

EXECUTIVE VIEWS

THE NEWS IN TEXTILES

WITH CONGRESS back in session, the fun has started again in Washington. During the several weeks since the election, there has been a considerable amount of drum beating out in the provinces, and it is not difficult to see that a great many drastic measures can come out of the nation's capitol this year which may have a terrific impact upon all business in general and upon the textile industry in particular.

The farmers voted for Truman because they felt they had a better chance of maintaining farm supports and subsidies, and labor voted for Truman because they thought they had a better chance to repeal the Taft-Hartley Act. If both of these groups were right, then certainly there is nothing in the national picture which indicates a reduction in government spending nor the strengthening of safeguards which something like a year ago were placed around the working man who did not want to join a labor union.

The expression, "write your congressmen," has been used so often that it has become about as trite as rain on Monday morning or the hangover after the heydey. Yet, unless the people who create the jobs in America let their Washington representatives know what they are thinking, then we are in for some rough weeks and months ahead. Your senators and your congressmen hear regularly from the organized groups on the other side of the street, and very seldom do they hear from the people who week after week must meet the payrolls of industry.

The Walsh-Healey Act. Many people who had considered the legislative picture were hopeful that something might be done during this session to repeal the obnoxious Public Contracts (Walsh-Healey) Act of 1936 which imposes minimum wage standards and maximum hour standards for all government contracts in excess of $10,000.00. This Act was passed back in the days when Congress felt that it had no constitutional right to control wages and hours except in cases in which government contracts were involved, but only a few years later—in 1940—the Fair Labor Standards Act was passed which set up such standards for all businesses engaged in interstate commerce. In the years which have followed, "interstate commerce" has come to mean almost anything.

Thus, it would seem that the Walsh-Healey Act, which was really passed as interim legislation, has long ago outlived its purpose. Certainly about the most important thing it does today is to further confuse an already confused situation.

Taft-Hartley Act. Labor people have had a great deal to say about the Taft-Hartley Act; and, because they have been so vocal in its enunciation, a considerable portion of the American public has come to believe that this is in reality a "slave labor" law. On the other hand, direct questioning of employees on the various provisions of the Act has indicated that most

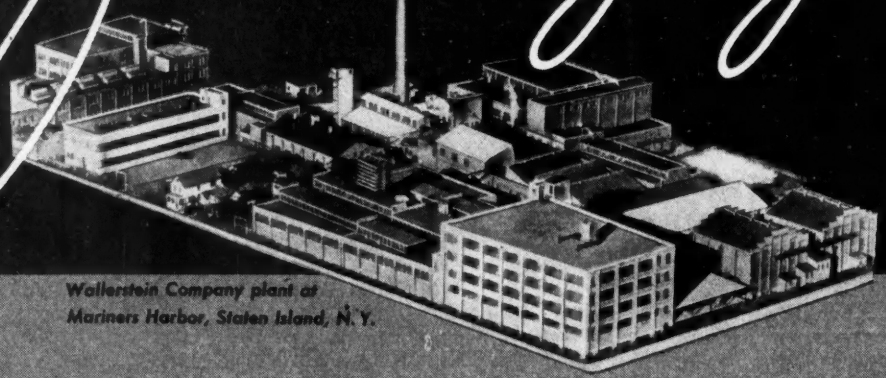
PUBLIC RELATIONS AT WORK

Textile mills recognize the value of a good public relations program. As an example of what one mill is doing as a phase of the public relations program, this picture shows the exhibit at the Chattooga (Ga.) County Fair by Summerville Manufacturing Co., manufacturers of ducks and osnaburgs.

Company products and end-use products both were exhibited; and to show how the fabric is made, a loom was operating. Other mill processes were depicted by photographs.

RAPIDASE

for de-sizing



Wallerstein Company plant at
Mariners Harbor, Staten Island, N. Y.

SPEEDS PRODUCTION

WITH HIGHER DE-SIZING TEMPERATURES

IS AND ALWAYS HAS BEEN—

HEAT RESISTANT

RAPID IN DE-SIZING

LIQUID — CONVENIENT

DE-SIZE FASTER AT LOWER COST WITH RAPIDASE

Technicians available • Write for Booklet

WALLERSTEIN COMPANY, INC. • 180 MADISON AVENUE • NEW YORK 16, N. Y.

of the working people who were questioned thought that the Taft-Hartley Act was a bad thing but that its provisions were splendid. In short, they had been told so many times that this was a "slave labor" law that they believed it even though in some cases they knew little or nothing about what it provided.

If industry and the American public feel that the Taft-Hartley Act protects the average American citizen in the exercise of his constitutional rights, then they had better speak up and speak up loudly enough for it to be heard in Washington because this is going to be one of the major issues of the current session.

Minimum Wage of 75 Cents? On a somewhat similar subject, the Walsh-Healey Act provides a minimum wage of 87 cents in the cotton goods industry as fixed by administrative decree; but the Fair Labor Standards Act at the present time requires only a 40 cents minimum. But, of course, the move is now on foot to increase this to 75 cents. While it is true that a 75 cent minimum would affect very few textile mills; nevertheless, the industry must oppose such an increase upon principle. If it is correct to fix a minimum of 75 cents, then what is to prevent Congress later fixing a minimum of $2.00? A 75 cent minimum is not too difficult to meet today but if depression or recession comes, the story will not be quite the same.

Foreign Trade Legislation. Still another subject which will be well to the front during the current congressional session is that of trade agreements. Congress will be asked to approve the charter of the International Trade Organization, better known as the ITO, and will also give consideration to the extension of the Trade Agreements Act.

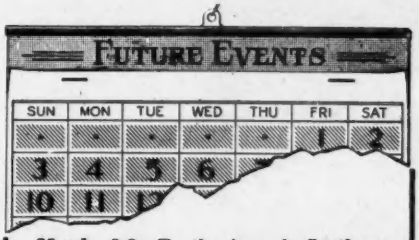
It is an altruistic thought to believe that since there is so much poverty in the world that the American people should do their part to alleviate that suffering. It is also an intriguing idea that the virtual elimination of all tariff walls would bring peace and plenty, sunshine and light to people in the Belgian Congo and Sumatra, and in Peoria, Illinois. Wherever the experiment of control has been tried on a national scale, we have found that it has failed dismally. This was true of Nazi Germany. It has proven true in Russia, and the United States found, too, that it could not prevent inflation by retarding production. There is no reason to believe that an attempt to fix prices and wages on an international scale and to remove tariff walls would prove any more successful.

If we are going to reach down and pull up the rest of the world through an instrument such as the ITO, then we are going to find that we are going to fall back down a considerable number of steps ourselves. All the "have not" nations of the world favor anything that will encourage a redistribution of wealth. The reason they favor it is because they know whose wealth will be redistributed.

Taxes and the FEPC. Undoubtedly Congress will not go home without making a vigorous attempt to do something about the Excess Profits Tax because that is always good political propaganda. The congressman who can go back home and boast of "soaking the rich" is always in great favor as a public speaker and is usually in considerable favor when the next election day rolls around. Few people take the time to point out that money drained off by taxes is generally used to set up more alphabetical agencies in Washington with more edicts, orders, interpretations, directives, and brochures, while if it had been left to circulate in a free economy, it would have made its contribution toward increased employment and increased payrolls. It is your job and mine to tell our congressmen that story.

Another inflammatory subject which is an odds-on favorite is the establishment of a FEPC. This is a subject which has been so bitterly contested that it is now difficult for either faction to mention it without racing off on a wild tangent. Aside from the issues involved, it seems rather clear that the establishment of a Fair Employment Practices Commission will undoubtedly impose additional troubles upon management. You can be reasonably certain that if this bill passes you are going to have plenty of evidence to show why you preferred an employee of one race, creed, or color in preference to an employee of some other race, creed, or color. It is no exaggeration to say that the federal government is going to have to establish a far-reaching gestapo-like service if it is going to follow up on all the complaints which will undoubtedly result after the passage of a FEPC. To cope with this army of sleuths, management is going to have to have complete records and plenty of quick answers.

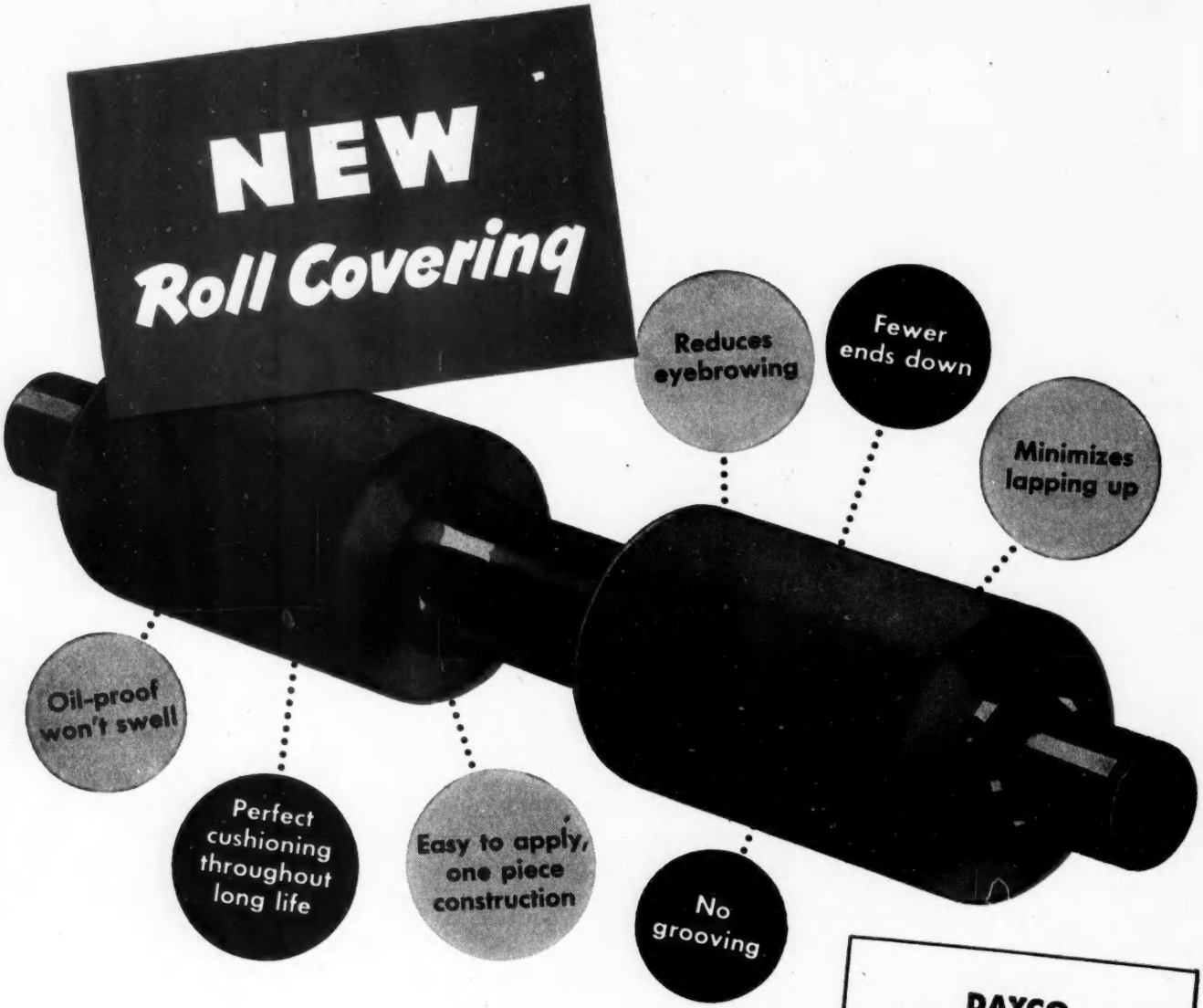
We have mentioned only a few of the things which Congress began considering this month, but it is at once apparent that this is going to be an important session. If Mr. Truman believes that he has a mandate from the American people to carry out the social reform program which he advocated in his speeches, then industry and the American nation are in for a bad time.



March 6-8—Tenth Annual **Southern Safety Conference**, Hillsboro Hotel, Tampa, Fla.
March 7-9—Annual meeting of **National Cotton Council**, Los Angeles, Calif.
March 21-25—**Textile Wet Processing Equipment and Supplies Exposition**, 71st Regiment Armory, New York, N. Y.
March 31-April 2—Annual convention, **American Cotton Manufacturers Association**, Palm Beach-Biltmore Hotel, Palm Beach, Fla.
April 25-29—**Knitting Arts Exhibition**, Atlantic City, N. J.
May 2-7—**International Textile Industries Exposition**, New York, N. Y.
May 9-13—4th annual **National Textile Seminar**, Shawnee Inn, Shawnee-on-the-Delaware, Pa.
May 9-14—**National Cotton Week.**

1950

May 8-12 — **American Textile Machinery Exhibition**, sponsored by National Association of Textile Machinery Manufacturers, Atlantic City Auditorium, Atlantic City, N. J.



Specially designed for running synthetic and natural fibers, the new red Dayco Type "SE" Roll Covering processes synthetics with greater uniformity, with less lapping up and practically no ends down. Not affected by heat or humidity, The Dayco Type "SE" Roll Covering will give the same uniform service throughout its extremely long life. Remember, whether you're running cotton, wool or synthetics there's a mill-proved Dayco especially engineered for your frames. For complete information write Dayton Rubber, Dayton, Ohio, or *Textile Division—Main Sales Office, Woodside Bldg., Greenville, South Carolina.*

DAYCO ROLL COVERINGS are available for drawing all types of fibers

Whether your frames are equipped with flat or revolving clearers, there is a specially engineered Dayco for maximum results.

TYPE "C" for revolving clearers. Precise, accurate accounting records show the cost per hour of operation is less—with Daycos.

TYPE "S" especially designed for flat clearers, where eyebrowing is a problem. Spinning room overseers, everywhere, acclaim Daycos' ability to draft uniform yarn.

Dayton Rubber

THE MARK OF TECHNICAL LEADERSHIP IN NATURAL AND SYNTHETIC RUBBER

Liked Old-Timer's Story

"Kindly pass this along to Mr. Low Clifford and tell him that I have just read OLD-TIMER's article telling of the wonderful work and the efficiency of all the people in his mill (operated by blind weavers). I know this will be a great inspiration to all who read this article, as it was to me."

M. M. DUNN
Vice-President
J. T. Flagg Knitting Co., Inc.
Florence, Alabama

". . . always enjoy reading what the OLD-TIMER has to say, and this time particularly enjoyed his visit to the Second Mill. He spoke of the weavers' unfailing accuracy and deftness. My Icelandic grandfather was a weaver and a poet, and I am sure that there is poetry in the rhythm of the looms, and that your blind weavers can feel it too."

LILLIAN GUDMUNDSSON
443 Second Ave.
New York 10, N. Y.

(Yes, OLD-TIMER's article about the mill operated by the blind had a quick response from a number of readers. If you did not read his article in the November 1948 issue, we recommend that you do so.)

◆

"Skirts Are Going Up Again" —Paris Headline

Christian Dior, the man who made the New Look, is fighting for it in the Paris autumn dress shows with all the skill and magic of a great designer, according to the French magazine "Commerce International." The article continues, "There is only one common agreement among all the top houses and that is that skirts are going up again."

And who says that advertising doesn't influence. Those Springs ads must have reached the Continent.

◆

Photomicrographs

"We are very much interested in your article 'Photomicrographs Tell a Story,' which appeared in the September 1948 issue of TEXTILE INDUSTRIES. May we have a reprint of this article for our file?"

MILDRED F. WALKINSHAW
The Shelton Looms
Sidney Blumenthal & Co., Inc.
Shelton, Conn.

◆

Following Up "Scuttlebut"

"Thank you for your letter. The account of our spinning activity in the newspaper was distorted and based entirely on 'scuttlebut.' For your information, no representative of the newspaper was in our spinning room."

NAME WITHHELD

◆

This Won't Get Any Funnier

And then there's the story of the honeymooning couple who saw the ad: "Airplane rides—all day Sunday —a dollar." But the lady said she didn't want to ride all day Sunday.

SHORTS and REMNANTS

1930 Article Still Good

"If it is still possible to get them would you mind sending me two dozen copies of the booklet 'Straightening Needles for Full-Fashioned Machines' by B. D. Gaddy, superintendent, knitting department, Golden Belt Mfg. Co. This article was reprinted from the October 1930 issue."

A. R. MURDOCK
Weldrest Hosiery, Ltd.
Farham, Quebec
Canada

(Article in question has been reprinted several times, and each time our supply runs out. Can furnish "How to Straighten Full-Fashioned Needles," a pictorial presentation.)

Our Own Back-Patting Dept.

For the first nine months of 1948 our (TI) increase in advertising pages was nearly three times as much as any other monthly textile publication. We welcome this increase in business from both old-timers and newcomers to the textile field.

Surprisingly enough, we still have some white space left.

To you newcomers, we'll say that your representatives will be calling on our textile mill men readers, who are the cream of the crop in American industry; they'll listen to your story because they're interested in improving mill conditions, but be sure your reps know the answers because those mill fellows really get to the root of the question.

DID YOU KNOW:

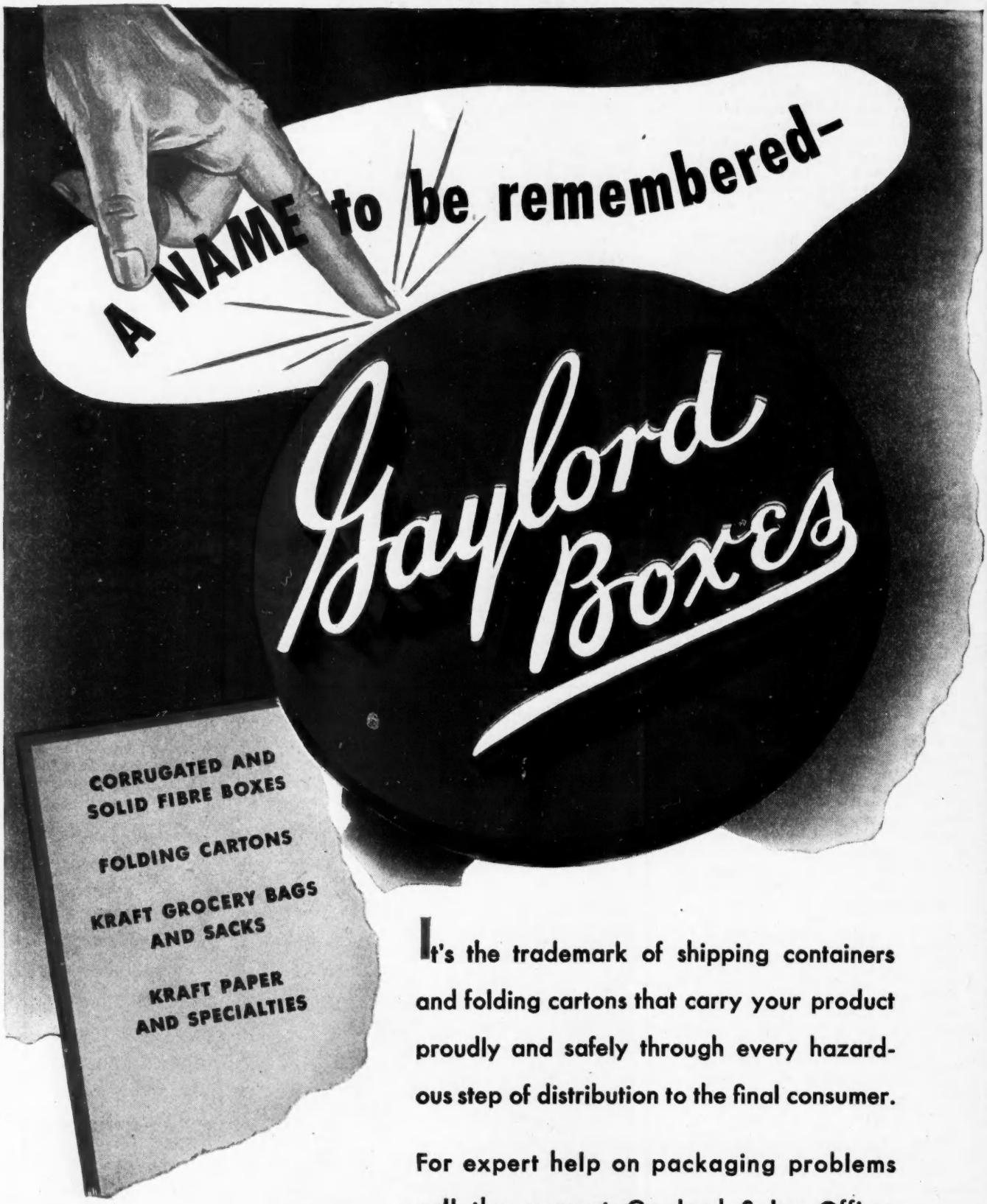
—That TEXTILE INDUSTRIES has more actual domestic mill circulation than any other textile publication (13.7% more than the next paper).

—That during the first nine months of 1948 TI published more production and mill management information than any other monthly publication.

—That before the end of the month (November) there were from our readers requests for more dope on 1324 items of New Equipment described in that issue.

MISS AMERICA IS SALES PERSONALITY

Pretty Miss America (Bebe Shopp) gets the award as "sales personality of the year"—and look who's doing the awarding: Orville C. Hognander of Tennant. Yes, sir! Our textile suppliers are still on the ball.



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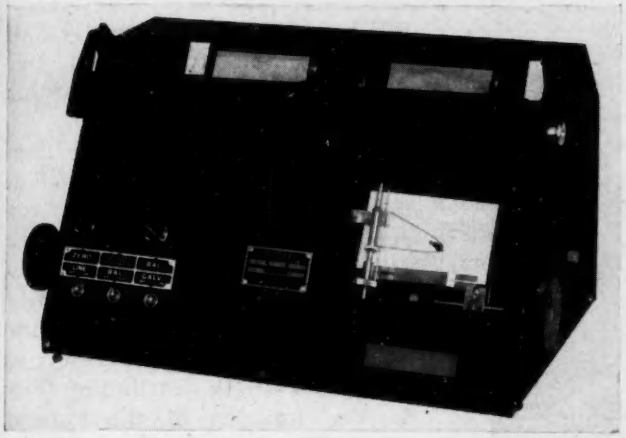


Fig. 1. The Model 800-F electronic Fibrograph.

Speeding Cotton Stapling

with Electronic Fibrograph

By JACK WITHERSPOON

Development Engineer
Fulton Sylphon Division
Robertshaw-Fulton Controls Co.

WHEN COTTON Breeders of the University of Tennessee Agricultural Extension Division needed to increase their daily output of tests on cotton samples, they presented their problems to the Physics Department. One of their requirements was a faster method of determining the staple length of fiber, and in 1940 Dr. K. L. Hertel of the Physics Department introduced his Fibrograph.*

This instrument made it possible to obtain reliable data on the length characteristics of as many as a hundred different cotton samples a day. An improved model is now on the market for which the instrument-conscious cotton industry is finding new uses. (See Figs. 1, 2, and 3.)

The latest electronic model manufactured by the Fulton Sylphon Division of the Robertshaw-Fulton Controls Company appears more complicated than the early instruments. Actually, this apparent complication of parts has resulted in a real simplification of manufacture, so that uniformity is obtained and final calibration is more accurate.

Operation of the Fibrograph. When a cotton sample is selected at random from a bale, the fibers must then be completely oriented as to length and direction. The

*Witherspoon, J.—"Cotton Fibre Length Meter Built Around Three Photocells"—Elec. Mfg. V.40-6, Dec. 1947.

Fig. 2. View of the Fibrograph shown in Fig. 1 with front cover removed to show parts.

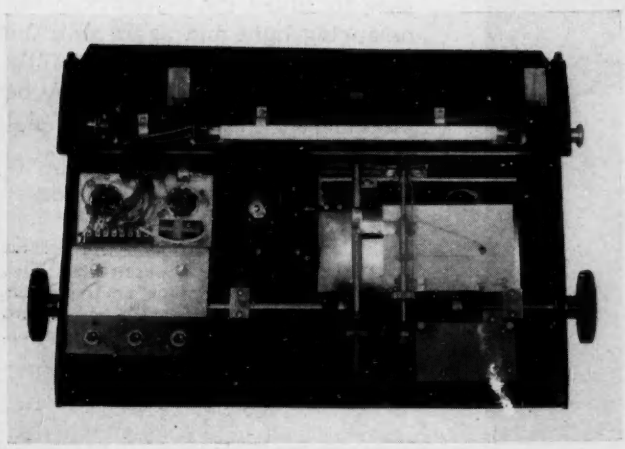
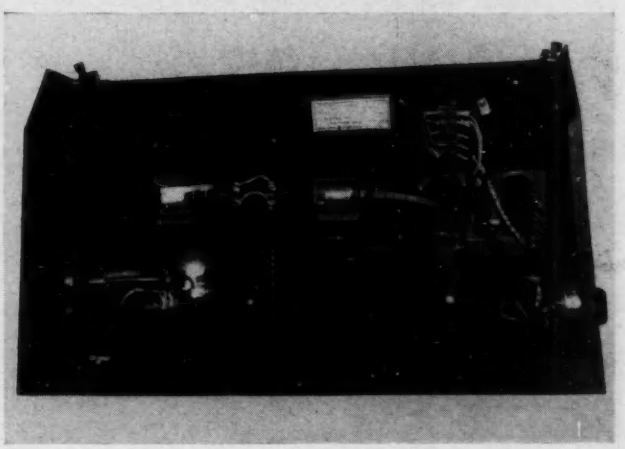


Fig. 3. Back cover removed to show electrical components of the Model 800-F electronic Fibrograph.



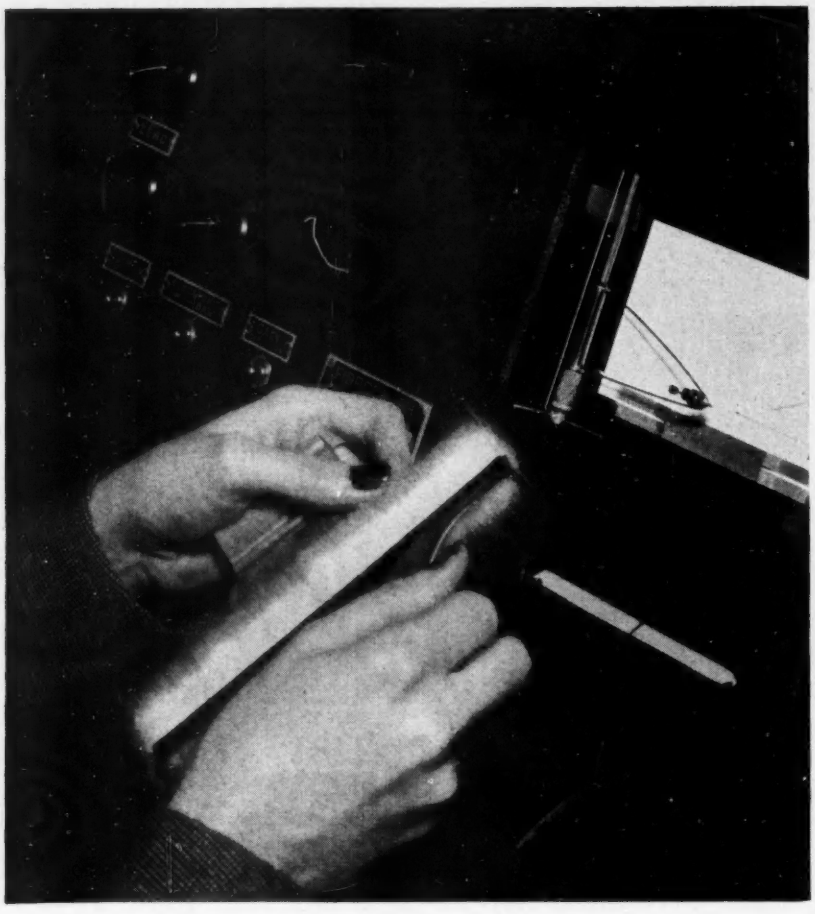


Fig. 4. Operative combing cotton for analysis. If the combing is done properly, the beard consists of exactly half of the sample divided on two combs, the other half remaining matted behind the combs.

combs used with the Fibrograph are for the purpose of removing the randomness of direction—as the classer does with his thumbs and forefingers. The random distribution as to length is maintained, but for analysis, the fibers extending from the comb are straightened to form a beard (Fig. 4). If the combing is properly done, this beard consists of exactly half of the sample divided on two combs, the other half remaining matted behind the combs.

The Fibrograph operator then scans this half sample of cotton, as the classer does with his eye, except that the instrument is used for measuring the amount of light passed through the fibers as they are scanned from comb teeth to fiber ends, and plots the result as a graph of length distribution (Fig. 8). The function of the various electrical and electronic circuits in the present Fibrograph is to add accuracy and sensitivity to this light measurement and make the operator's job easier.

Determination of Staple. In checking a sample of cotton fiber, the operator first turns the instrument on and makes certain that the galvanometer is zeroed mechanically and that the scanning light is burning. If the instrument has not been in use, about 20 minutes is allowed for the electrical elements to stabilize, after which the electronic switches are turned to the "Balance" position.

This allows the amplifier circuit to be balanced without influence from the phototubes, by adjusting the galvanometer to zero with the knob provided. The electronic switch can then be turned to the "Test" position and, with the indices lined up, another knob is used to adjust the intensity of the balancing light and again zero the galvanometer. The carefully combed cotton sample can now be placed in the instrument and scanned.

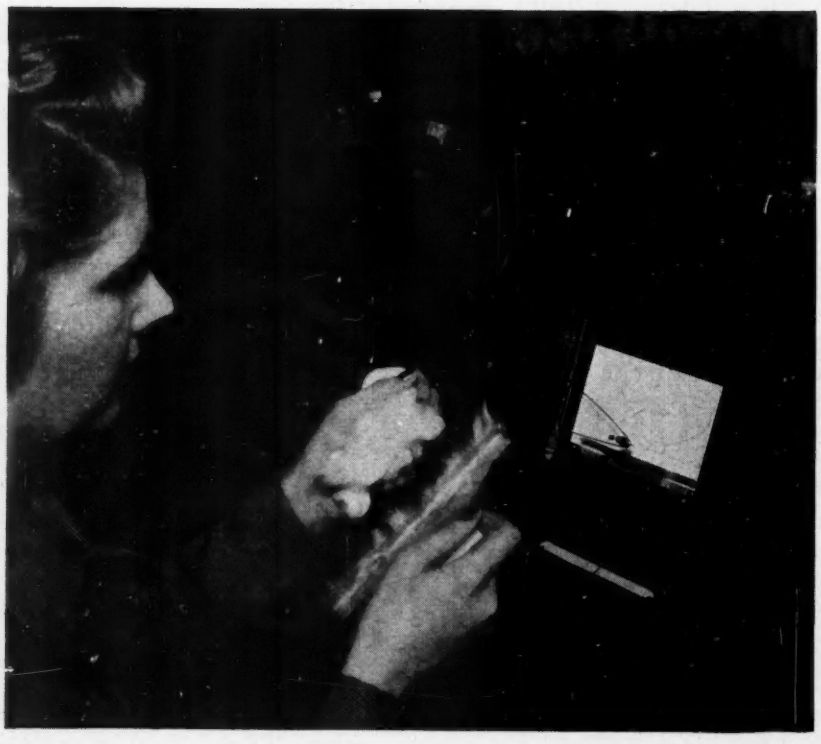


Fig. 5. Careful placing of the cotton on the comb teeth is essential. The usual practice is to place on the comb teeth enough cotton from a one ounce sample to give an even distribution across the teeth.

The mean length of the fibers is obtained by drawing a tangent to the lower part of the Fibrogram curve, and measuring its intersection with the vertical axis, giving inches of cotton length directly. The upper-half mean is obtained in a similar manner by bisecting the intersection of the first tangent at the horizontal axis, and drawing a second tangent to the curve.

Too much emphasis can not be placed on the necessity for careful combing of the cotton sample. The quantity of cotton used may vary considerably without affecting the accuracy of the result, but the method by which it is placed on the combs is very important (Fig. 5). The usual practice is to place on the comb teeth enough cotton from a one ounce sample to give an even distribution across the teeth. If too much is used, the sample may be out of the range of the instrument to balance; if too little, the resulting curve will be short and steep, promoting inaccuracies in drawing tangents. A few trials will indicate the right amount.

The combs are then manipulated together, starting with the very ends of the longest fibers and gradually working in toward the comb teeth, until all the fibers are straightened. It is good practice to transfer the cotton from one comb to the other several times to promote random distribution. During the entire process, care must be taken to avoid breaking fibers as this will obviously result in a shorter mean length than the cotton from which the sample was taken.

The theory of the Fibrograph depends upon perfectly random distribution of the fibers and, though the instrument is calibrated to read accurately to the hundredth of an inch, it cannot compensate for poor combing.

Most laboratories have found that, even with careful combing, it is necessary to average the re-

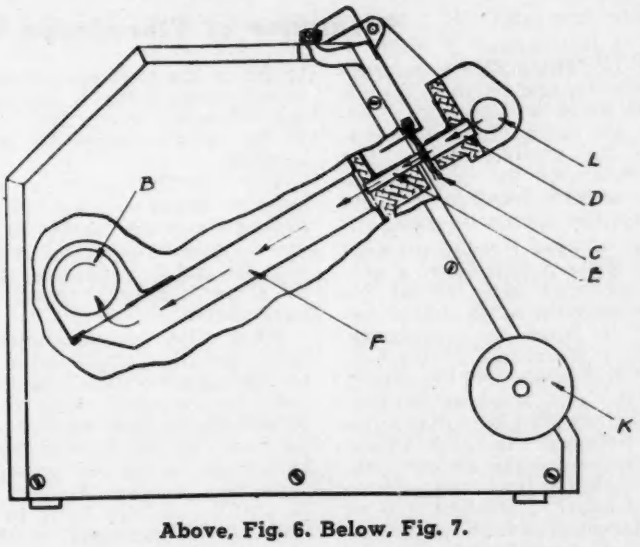
How the Electronic Fibrograph Operates

In the diagram (Figs. 6 and 7) the cotton combs are shown mounted on the instrument at "C." An 8 watt fluorescent lamp "L" is mounted in a rotatable lighthouse, and when in position for scanning, its light is carried through ¼" thick diffusing lenses "D" to illuminate the cotton. Both lens "D" and receiving lens "E," which is only ⅛" thick, extend the length of the two cotton combs and serve to distribute the light evenly.

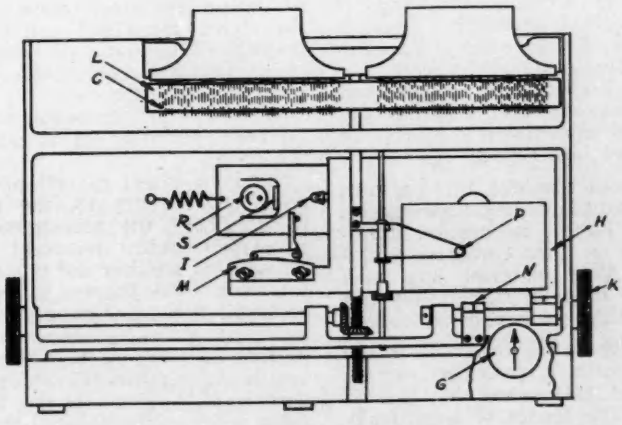
Lens "E" is also arranged to absorb any stray room light, so that only the light from the lighthouse reaches the phototubes. This light, after passing through the cotton, is collected from each comb separately and focused by telescoping lenses "F" on the two vacuum phototubes at "B." A light beam galvanometer "G" is used to measure the light passed through the cotton. The difference between the present electronic models (800-E and 800-F) and the original design lies in the fact that the photo-voltaic cells, which supplied their own minute currents have been replaced by vacuum phototubes "B."

The electrical resistance of tubes "B" changes in proportion to the light received. A rectifier circuit supplies power to the phototubes. A third phototube "R" illuminated through a diffusing screen "S" by an incandescent lamp "I" provides means for balancing the cotton illumination, the currents through tubes "B" and "R" being fed through an amplifier circuit to the galvanometer.

The handwheel at the left is geared to move the cotton sample "C" and the pen "P" upwards,



Above, Fig. 6. Below, Fig. 7.



and the right handwheel "K" moves the card holder "H" and the balancing light "I" horizontally. In using the Fibrograph, these handwheels are manipulated together to keep the galvanometer in balance and a curve is thus drawn by the pen on the card.

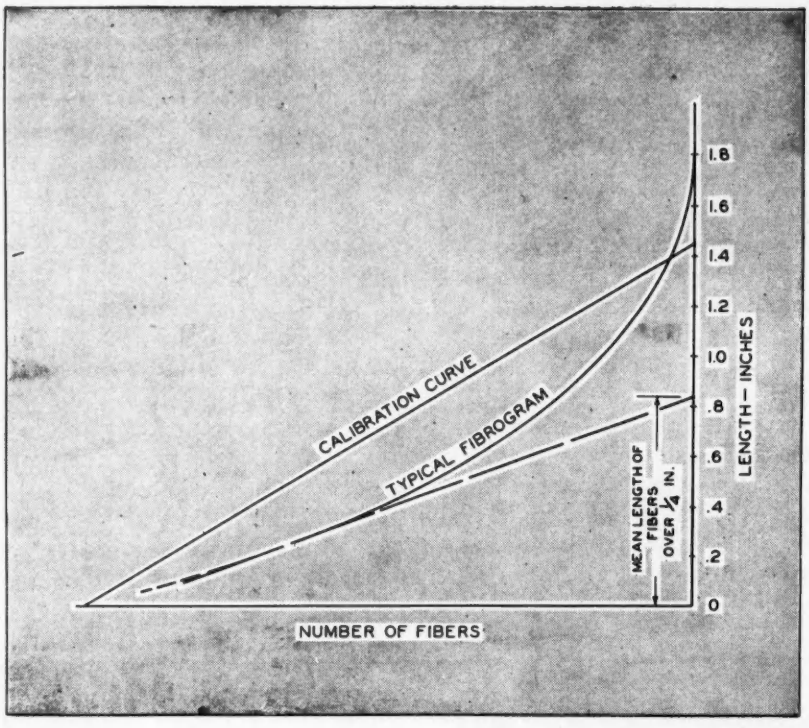


Fig. 6. A permanent record is obtained in the form of a Fibrogram card which can be examined at any time and compared with other cards obtained at other times.

sult of several samples to attain the accuracy that the instrument is capable of giving. The advantage to the laboratory, and to the mill, is that, though a degree of skill in combing is necessary, the judgment and long experience required of the classer is not required of the Fibrograph operator. Even if it is necessary to average the results of several tests, the time consumed is still less than in other mechanical methods.

Figures 6 and 7 show simplified drawings of the machine, with accompanying description of the mechanical components.

Technique of Fibrograph Calibration

IF THE INSTRUMENT is in proper calibration and balance, the Fibrogram curve will present a picture of the actual fiber distribution of the sample, with fiber length shown on the vertical axis and the relative number of fibers shown on the horizontal axis.

Let us assume for the moment that we have a sample of a cotton which grew with all of the fibers exactly the same length. According to laws of probability, when such a sample is combed, some of the fibers will be caught at the very end, some in the middle, and there will be equal numbers in between. In other words, the beard will have an even tapered thickness and the sample should produce a straight line on the Fibrograph, indicating that there is only one length. Thus if the horizontal handwheel, moving the card holder and balancing light is so geared as to produce a straight line on the card when such a uniform sample is scanned, then the instrument will be in calibration (see Fig. 8).

In actual practice the uniform cotton sample is replaced by an easier to handle calibration standard such as linen-embossed cellophane. This material has been found to have approximately the same optical properties as cotton.

To calibrate a Fibrograph in the factory, such a pack of, say 20 sheets, of cellophane is inserted between the lenses of a properly balanced instrument. The decrease in light to the phototubes "B" will cause the galvanometer beam to deflect to the right. The right hand wheel is then rotated to move the card holder and the incandescent lamp "I" away from the balancing phototube "R," until the galvanometer is again in balance.

The starting position of the lamp "I" governs this initial movement for a given number of sheets (or a given thickness of cotton sample) and it is adjusted to give the same "horizontal travel" on all instruments.

When the galvanometer has been zeroed, a small dot is made by momentarily touching the pen point to the card. One sheet of cellophane is then slipped out of the pack, leaving 19, and the other handwheel is turned one-quarter revolution, raising the pen exactly 1/16". As the light to tubes "B" is now increased by the removal of one sheet of cellophane, the right handwheel will have to be rotated to bring the balancing lamp, and the card holder, back toward phototube "R."

When the galvanometer is again on zero, another dot is made on the card.

Again, a sheet of cellophane is removed, leaving 18, the pen is raised 1/16", the galvanometer is rebalanced with the right handwheel, and another dot is made on the card. The process is repeated until all the cellophane has been removed, sheet by sheet, and the indices "N" are back at the original balance position. The card is then removed, and, if the instrument is in calibration, all the dots will lie on a straight line, each dot being 1/16" above and T/20 to the right of the preceding one, where T is the total horizontal travel.

Actually, the uncorrected line would tend to bow downward, due to differences in the separate laws of physics governing the variation in light through a tapered diffuse material, and the balancing light varying with distance. This bow is corrected by cam "M," (Figs. 6 and 7), which has been calculated as the difference between these two laws and also serves as a calibration adjustment.

The socket for the phototube "R," is fastened to a sliding mount, along with the diffusing screen "S," and is connected by flexible wiring to the rest of the circuit. The slide is biased in a direction away from the small balancing lamp by a spring and rests against a bell crank lever, whose other end in turn can be seen to rest against the cam surface attached to the card carrier. The cam is held to the card carrier by two screws in slotted holes so that it can not only be moved back and forth for factory adjustment, but can be readily replaced by a slightly modified cam.

In addition, the point at which the sliding phototube holder rests against the bell crank is adjustable, so that the effect of the cam can be multiplied by a greater or lesser lever ratio as required. Thus, as the card carrier is moved, the cam attached to it raises and lowers the bell crank, moving the phototube as required to always give the correct distance between the balancing lamp and screen "S." After final corrections are made as described, and a straight line is obtained on the card, all adjustments are sealed and the instrument is in calibration.

Blending Fibers at Drawing Process

By WILSON ORR

MANY textile mills consider the possibility of processing various types of synthetic and natural fiber blends by blending in sliver form on the drawing frames. If satisfactory results can be obtained, the process simplification appears to be of value. There are several factors to be considered, namely—uniformity of the finished yarn and fabric in respect to uniform fiber distribution, and even drafting of the individual slivers on the drawing processes.

Blending on the drawing frame does more than just create a spiral type of yarn. Although the draft on the average drawing frame is low, each type of fiber and fiber fineness will vary in drafting if the same roll setting is used.

Drafting Qualities

Repeated tests with various fibers and fiber sizes, on both metallic and cushion type rolls, clearly indicate the difference in drafting qualities of the various fibers. This difference is probably due to the amount of crimp present, the finish on the fiber, and the density of the card sliver being delivered to the drawing. Metallic type rolls appear to be superior in leveling out these differences in drafting ability of the different fibers commonly found in present day blends.

This difference in drafting recently showed up when a new highly crimped viscose staple appeared on the market. Due to the shortage of viscose staple, this new fiber was used in a blend replacing one-half of the regular viscose. In a few days the spinning efficiency dropped to forty ends down per thousand spindle hours, the yarn was ragged, and the breaking strength was low. The sliver uniformity tester showed that the finished drawing sliver increased in variation from 20.6% to 23.8%.

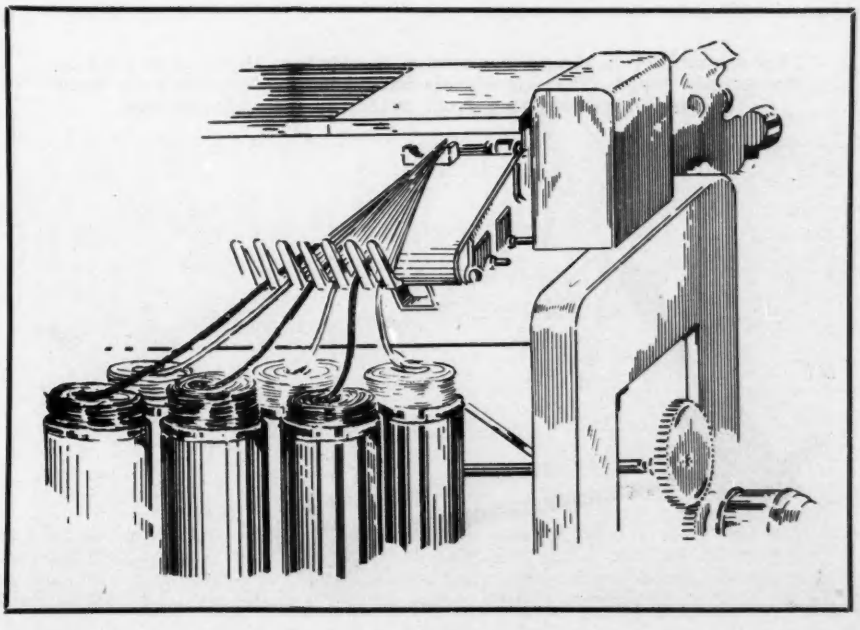
Several trial lots were processed with various roll settings and it was found that a closer setting between rolls three and four (back rolls) aided the parallelizing of the highly crimped fibers, and the spinning efficiency came back to normal. The normal settings of 2.5″ between rolls three and four were reduced to 2 3/16″.

If there is a difference in the uniformity of drafting of the various fibers, and it appears to be so, blending before picking and carding will be of value. The card, in spite of its slow speed and other objectionable features, aids in blending the various fibers as the fibers are held and let loose by the flats.

There is another objectionable feature to drawing blending. As card sliver varies in weight, and as operators often overlap ends when putting up new or broken ends, uneven blending results. This type of imperfection is serious, especially if the resulting yarn is to be woven on a loom with only one shuttle. The knitting yarn trade could use a drawing blended yarn, but it is very doubtful that the process would be permissible for the critical weaving trade if the fabric is to be cross-dyed.

Several tow-to-top processes are being tried out in the trade. Experience along this line is very limited but two things appear to be certain: (1) This simplified process will eventually replace the present cards and pickers and (2) the rayon manufacturers will have to produce tow or continuous filaments with similar finishes for viscose, protein, acetate and nylon fibers.

This is mentioned because the blending, or additional blending will be carried out on the drawing process, and if the fiber surface treatment is not alike, the drafting results in a fiber selection that is disastrous to the finished goods even though it may be union dyed. Of course 100% yarns of viscose or nylon do not create this problem, but the finish should be the type that will allow the fibers to separate easily, so they will not draft in groups.



Planimeter Provides Easy Method for

The Evaluation of Evenness Tests

Staff Prepared

The planimeter quickly and almost automatically gives variation in percentage terms.

THE CURRENT interest in improving uniformity of yarn and the subsequent necessity for measuring evenness to determine the variations in processed stock in the spinning operations has led to the adoption of numerous methods for calculating these factors.

Many of the methods now in use do not produce consistent results, and in many instances test results are not comparable from one mill to another. Oftentimes a factor of error is introduced in the mills that do not have a positive procedure which minimizes the "human element" as far as possible.

The advent of mechanical testers has aided in simplifying the operations necessary to determine the variations in a strand of sliver or yarn. Laboratory procedures in measuring uniformity no longer need be as tedious and time consuming as they were before mechanical evenness testers were introduced. Although mechanical testers have reduced the number of operations and the time necessary to perform such tests, there remains much to be desired. Some mills continue to use laborious mathematical formulas for calculating the results of findings in evenness tests. Today, some mills are using the planimeter in the mathematical interpretation of graph-recorded tests.

Planimeter Applied to Textiles. The planimeter is not by any means a new instrument, but it is finding effective application in textile plants and laboratories engaged in testing for variations in the spinning processes. The planimeter has long been used to measure the area of plane figures by tracing the bounding line.

In textile applications, it is now being used to advantage in determining the average variation in percentage by mathematical diagnosis of curves or graph-recorded variations. Some of the mechanical testers now in use that produce curves recorded in graph form are the Saco-Lowell sliver tester, the Uster evenness tester, and the Pacific sliver and yarn tester.

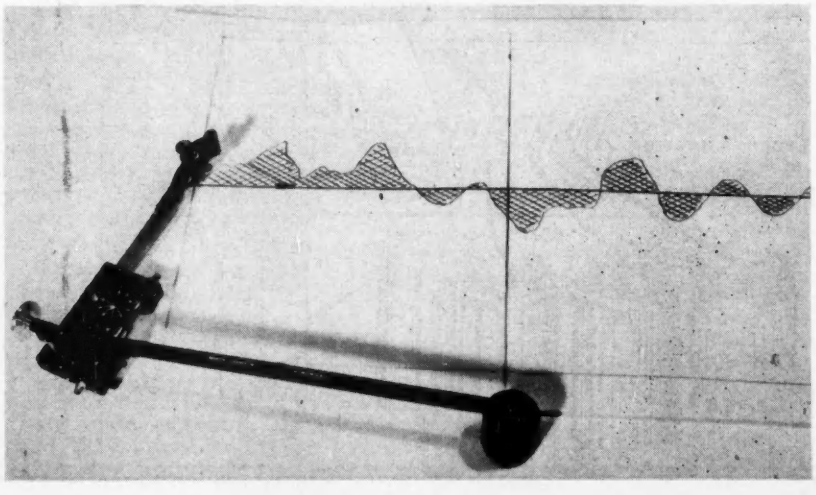
This means of determining the results recorded on graphs can be done quickly with ease, and reliable figures are obtained. To be specific, a detailed explanation of the procedure is given using a graph recorded on a Uster evenness tester. With some modifications, the same procedure can be adapted to other graphic data.

Sample Study. Assuming a recorded graph is available from a testing machine which has been used to test a sample of yarn, sliver, or roving; and that it is desired to determine the average variation (in percentage) of the stock tested, the procedure is as follows:

Select a length (l) between two points indicated by the letters (A) and (D) in the accompanying illustrations. In the sample, the length (l) is 20 cm. Using a planimeter, start at (A) and trace vertically parallel to (B). (B) is the point where the curve is stopped by the selected distance (20 cm). Follow the entire curve to (C), which is the opposite end of the selected distance (20 cm). Then trace parallel downward to (D) and straight back to (A), which is the starting point. The resulting figure taken from the reading on the planimeter [the shaded area on the graph] is (F). To determine the exact average line, divide (F) by (1). The resultant figure is the height or middle line (m).

Then draw the middle line (m) on the diagram. Each horizontal space represents five mm. The middle line on the printed form is the 25 mm mark. The planimeter

This planimeter is shown in position to measure the shaded area on the sample graph. The use of this instrument helps eliminate some of the errors resulting from mathematical calculations.



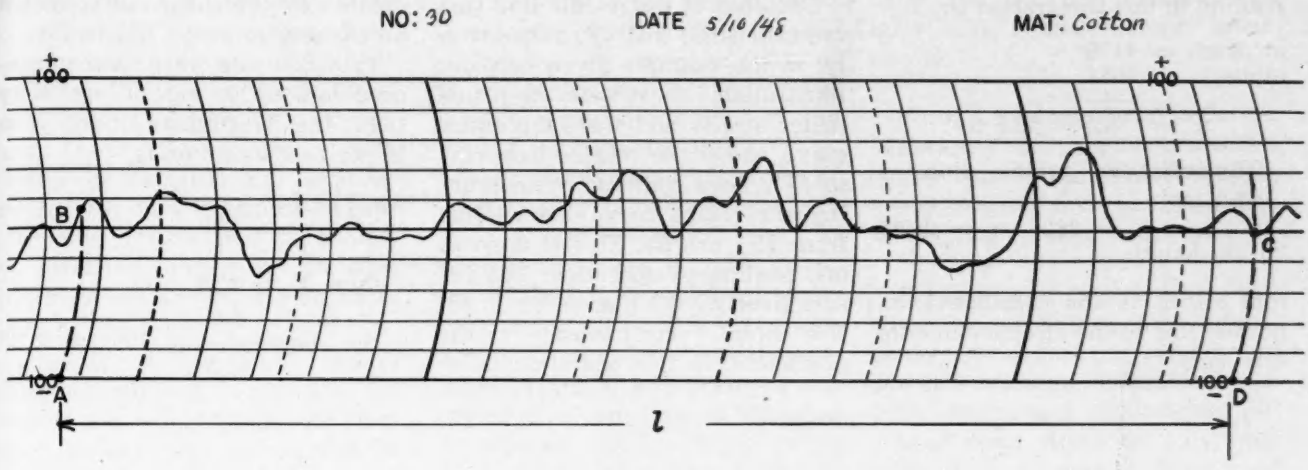


Fig. 1
The letter (l) indicates the 20 cm portion of the graph selected for the analysis. A line is constructed from (A) to (B) to intersect the recorded curve. A similar line is constructed at the other end of the selected length (l). The procedure is started by tracing vertically from (A) to (B). [Figs. 2 and 3 are not identical with the curve shown here, but in this illustration they should be assumed to be identical.]

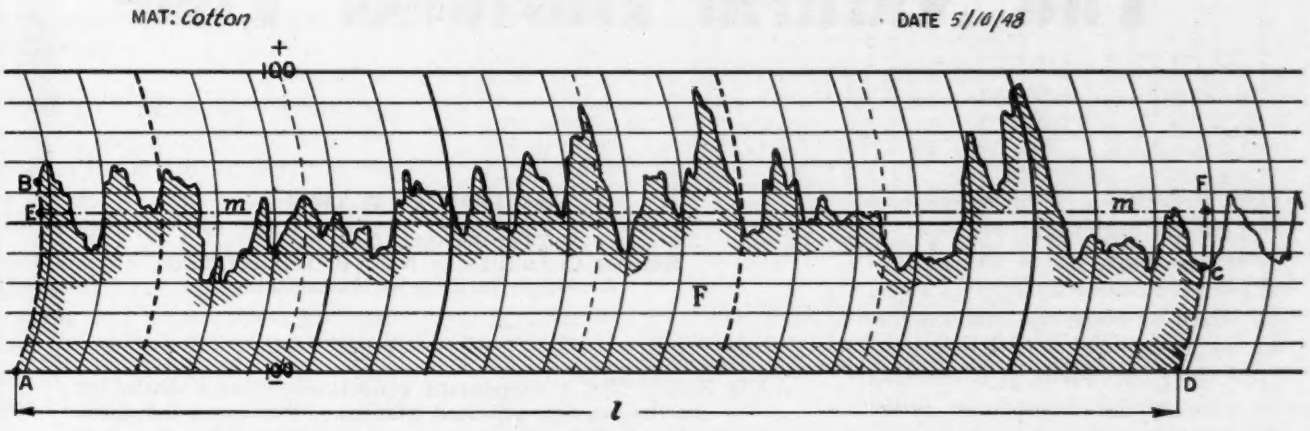


Fig. 2
The shaded portion in this sample graph indicates the area included by tracing the recorded curve from (A) to (B) to (C), (D), and back to (A). The shaded area represents (F). To determine the exact average line (m), divide (F) by (l).

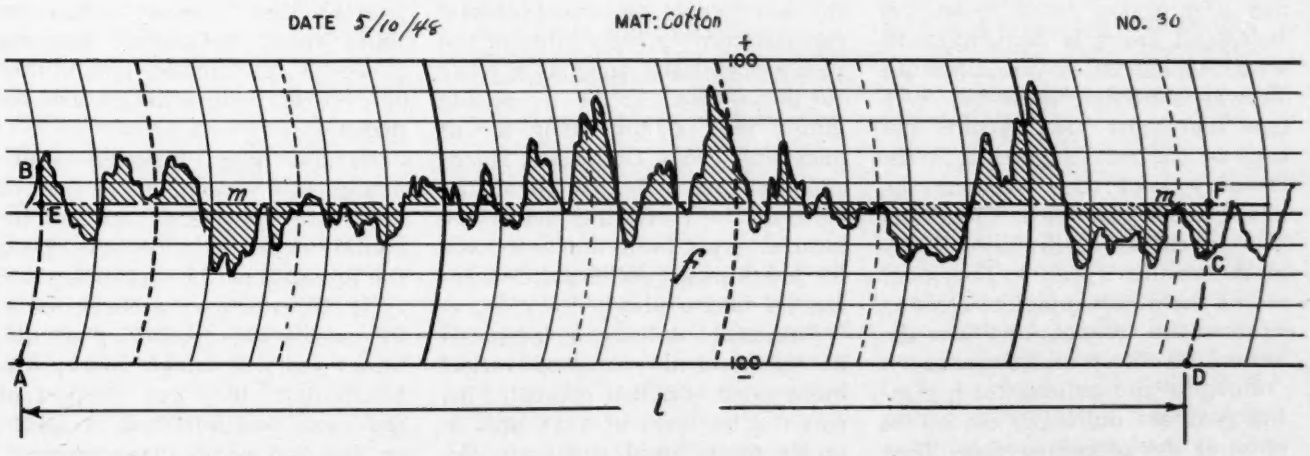


Fig. 3
To determine (f), start with the planimeter at (E) which designates one end of the middle line (m). Trace the entire curve above the middle line (m) to (F) which designates the other end of the middle line. Continuing from (F), trace the line downward to (C), and trace the entire curve below the middle line (m) to (E). The resultant figure taken from the planimeter represents (f).

reading in this illustration is:

at finish = 4176
at start = 3651

$$F = 525 = 52.5 \text{ cm}^2$$

The effective middle line = 52.5 cm^2 / 20 cm length = 2625 cm = 26.25 mm which is the distance from bottom line to the effective middle line (m).

The ends of the middle line (m) are called (E) and (F) respectively, in the example given here for illustration. Start with the planimeter at (E) and trace the entire curve *above* the middle line (m) to (F). Then continue by measuring the entire curve below (m) from (F) to (E). This is done in one continuous operation. The result given by the planimeter is (f). The area encompassed by the planimeter in this operation is indicated by the shaded area shown on the second graph illustration.

Provided the yarn was measured on the 100 range of sensitivity scale, the irregularity of the yarn in per cent variation is:

$$\frac{f}{F} \times 100$$

then $F = 52.5$

$$\text{therefore } \frac{9.6}{52.5} \times 100 = 18.25$$

Efficient Planning Through Use of

The Natural Business Year

By ROY L. WARD

CPA, Atlanta, Georgia
Member Committee on Natural Business Year
American Institute of Accountants

NO BUSINESS management consciously places obstacles in the way of efficient planning. But many business managers and proprietors unconsciously make effective planning unnecessarily difficult by clinging to the calendar year as their basic accounting period instead of adopting their natural business year.

THE NATURAL business year—or natural fiscal year—of a business enterprise is the period of twelve consecutive months ending when its activities have reached the lowest point in its annual cycle. In other words, it is the fiscal year which corresponds with the operating cycle of the business.

Most Textile Plants Use Calendar Year. Under average conditions, the natural year closing date for cotton textile weavers producing grey goods, white goods, or industrial goods is September 30, with August 31 as an alternate. Prewar statistics, however, indicate that more than seventy per cent of the establishments in the industry kept their accounts on a calendar year basis. The fact that inventory stocks are usually at their annual peak in December shows the disadvantage of electing to close the accounts and take the annual inventory on December 31.

Budgets and policies for a coming year are ordinarily set at the close of the preceding year. They are based not only on what is expected to happen in the coming twelve months, but, equally important, on what has happened in the last twelve months. Financial reports showing the results of the year's operations serve as a guide to the future. To be a reliable guide, they should show a full operating cycle. Obviously, financial statements drawn up at the close of the cycle, the end of the natural year, form the best basis for judging past policies and deciding on future plans.

Financial statements prepared at the natural year end reflect more facts and less estimate, because a business at that time is in its most liquid condition. Receivables and inventories, for example, two of the most important items in income statements and balance sheets, are then at or nearest their annual minimum. Since their "valuation" involves a degree of estimate, possibilities of over or underestimate are reduced.

Natural year financial statements give a complete picture of the year's experience, without including expenses or revenues from the previous or the next operating cycle. They are an accurate basis for comparing operations of different years. If drawn up at a different date, they cut off part of one cycle and attach it to another, and as a result make comparisons of different years difficult or misleading.

Time Advantage. The logical

point in the year for executives to review past experiences and determine new policies and budgets is when they have the greatest amount of time free for that purpose. During the seasons of high production or sales, it is impossible for the busy executive to consider thoughtfully matters of policy affecting the future. His time and his mind are focused on problems of the present.

Critical review and careful planning can best be done at the end of the natural business year, when management is relieved, to some extent, of usual sales and production duties. The period between operating seasons is the most sensible time to negotiate sales or wage contracts, consider future credit needs, approve expansion programs and new equipment budgets, and make other preparations for the coming year's activities.

Aid to Accounting Department. Closing the accounts of the business at the end of the natural year is helpful to personnel of the accounting department. It causes less interference with routine duties. Generally speaking, the work of closing the accounts is the heaviest which the department undertakes in the course of the year. Scheduling it for a comparatively low point in the department's activities results in a minimum of confusion and interruption.

Taking inventory at the close of the natural business year, when stocks are lowest, naturally cuts down the time required for checking and tabulating. In addition, regular employees may be relieved of their normal responsibilities and be available to help. In some organizations, of course, part of the work of taking inventory is distributed throughout the year. There nevertheless remains the last-minute task of bringing records up to date and summarizing them prior to the annual closing of accounts.

Helps Outside Groups. Most managements probably do not realize that use of natural business years helps to spread the work of public accounting firms and bankers and other credit grantors. Because of the large number of calendar year closings at the present time, the demand for public accounting service and audits is disproportionately high at the turn of the calendar year.

With an excessive number of annual audits to perform, the certified public accountant finds it difficult to devote as much attention to each business client as he might like. He is in a poor position to supplement the audit service with constructive counsel and advice. This unbalanced situation is corrected when clients adopt their different natural business years, whose closings are spread more evenly through the calendar year.

Credit staffs of banks and credit organizations are faced with much the same problem. At the end of the calendar year they are under pressure to review and analyze within relatively few weeks hundreds of financial statements of prospective borrowers. If submission of these statements is distributed through the calendar year according to natural closing dates, the seasonal fluctuation of their work is automatically leveled off.

Natural Business Year of Cotton Weavers. Four basic factors which reflect the cotton weaver's cycle are shipments, inventories, receivables, and current liabilities.

Shipments of weavers are customarily marked by two annual peaks. The first is usually in March, following a gradual rise from November. Shipments decrease from April to July, and then increase again to the second peak in September.

NATURAL BUSINESS YEAR DETERMINATION CHART

19—	Production			Inventories at Close of Month: Raw Materials			Goods in Process			Finished Goods			Sales			Accounts Receivable			Accounts Payable			Notes Payable		
	$		%	$		%	$		%	$		%	$		%	$		%	$		%	$		%
Jan.																								
Feb.																								
March																								
April																								
May																								
June																								
July																								
Aug.																								
Sept.																								
Oct.																								
Nov.																								
Dec.																								
			100%			100%			100%			100%			100%			100%			100%			100%

Form for Use With Determination Chart

Nature of business..... How long in business..... Present fiscal year.....
Location of plants..... Location of principal sources of supply.....
Stocks listed on..... Exchange Bonds listed on..... Exchange
Does company use perpetual inventory system? How often is physical inventory taken?.....
Statements prepared by company monthly..... Cumulative..... 12 months ended.....
Use made of statements prepared by company.....
Use made of reports of auditors.....
Does company use a budget? What is fiscal year for budget?
Reports to stockholders: Annually..... Semi-annually..... Quarterly.....
If partnership, do partners report income to U. S. Government for same period as partnership?.....

The accompanying form is intended for use in obtaining information with regard to seasonal fluctuations in specific businesses or industries, for the purpose of determining whether changes in fiscal years might be of advantage. In many cases, it may not be practicable to obtain and list information for all of the columns and spaces in the chart. In others, fluctuations will be more clearly indicated by additional or substitute headings.

Information for more than one year obviously would furnish a more dependable guide to seasonal fluctuations than information for only one year. Where practicable, it should be obtained for a period of years.

Inventories follow a trend which is generally the reverse of shipments. Inventory stocks are ordinarily at their lowest in September, depleted by the heavy shipments during that month. They build up to a high point in December, then drop until March, and rise to another high in June or July.

Receivables dating from the

(*Continued on page* 169)

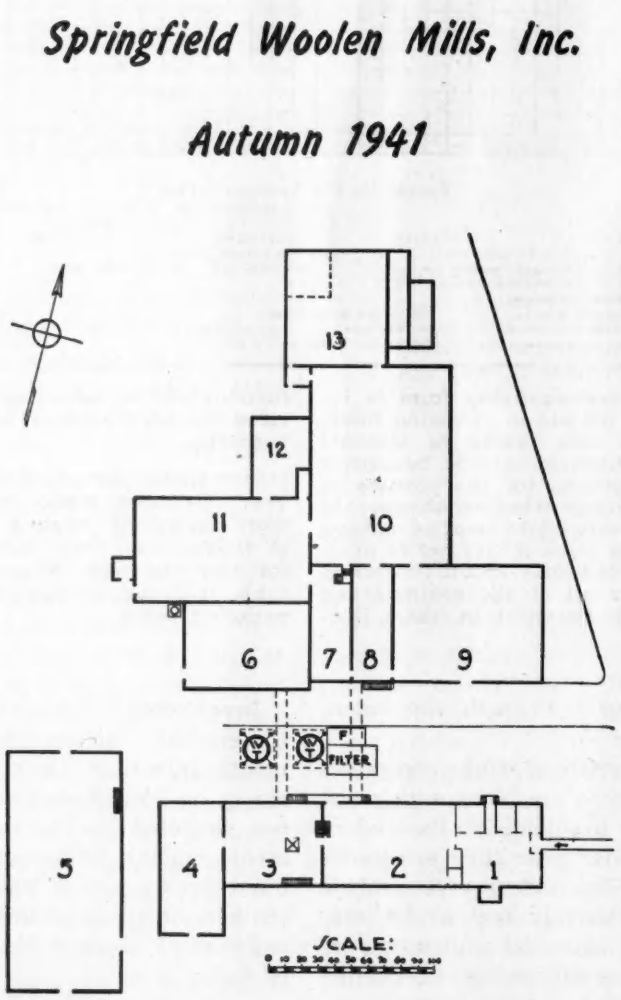
Springfield Woolen Modernizes

Tennessee woolen mill cuts costs, increases wages, and increases output 40 per cent through carefully planned modernization program.

SPRINGFIELD Woolen Mills, Inc., Springfield, Tennessee, embarked upon a program of planned modernization beginning in the Autumn of 1941.

In addition to cutting costs, wages were greatly increased, and output was increased 40 per cent while the working force was reduced from 520 to 320. Output is up 80 per cent over 1941 when the idea was conceived. Wages have nearly doubled. The change-over was accomplished during a difficult period without a single shut-down of any duration.

An examination of the two drawings will show the changes made. On the second floor, the partition between areas 7, 8, and 9 (drawing at left) were removed. The card room was extended to cover all three. The removal of the partition not only permitted rearrangement of the cards to better advantage, but also gave room



1	First Floor—Office Second Floor—Dyed Raw Stock Storage
2	First Floor—Cutting and Finishing Second Floor—Dyed Raw Stock Storage
3	Basement—Shipping Supply Storage First Floor—Packing and Shipping Second Floor—Raw Stock Storage
4	Basement—Machine Shop First Floor—Finished Stock Storage Second Floor—Raw Stock Storage Third Floor—Raw Stock Storage
5	First Floor—Wool Storage Second Floor—Finished Stock Storage
6	Boiler House and Coal Storage— 1—200 H P Stoker Fired, Water Tube Boiler 1—150 H P Hand Fired, H. R. T. Boiler
7	First Floor—Yarn Storage Second Floor—Picker Room
8	First Floor—Yarn Storage Second Floor—Waste Room
9	First Floor—Warp Room Second Floor—Card Room—6 cards placed "cross wise"
10	Basement—Wet Finishing, Scouring & Fulling, Piece Goods Napping, Raw Stock Scouring First Floor—Weave Room 60 Looms 82" to 110" Second Floor—Spinning Room, 10—330-spindle spinning mules, 2 cards
11	First Floor—Mending and Burling, Weighing and Measuring, Pressing and Rolling Second Floor—Spinning Room, 7—330-spindle spinning mules
12	First Floor—Dye House, 5-8 ft. diameter hand poled open vats
13	Basement—Burr Picker First Floor—Drying Room, 1—Kenyon Drum Cloth Dryer, 2—Raw Stock Dryers
WT	Elevated Water Storage Tanks

for additional installations.

Two second floor areas (10 and 11 in drawing at left) were formerly used as spinning rooms. The larger of these rooms contained ten 330-spindle spinning mules, and the other contained seven. These were removed, and sixteen 120-spindle large package spinning frames were installed in the room which had formerly contained the ten mules. These sixteen frames have a higher output than the seventeen old mules, and they occupy about half the space formerly required.

In the new napping and inspection room, eight new napping machines, arranged in tandem, have saved 27 operations formerly required when set side by side.

Springfield Woolen Mills, Inc.
Autumn 1947

1 First Floor—Office
Second Floor—Blanket cutting and binding
First Floor — Finished Blanket Storage

2 Second Floor—Blanket Cutting and Binding

3 Basement — Shipping Supplies Storage
First Floor — Finished Blanket Storage (in Bins)
Second Floor—Storage

4 Basement — Shipping Supplies Storage
First Floor — Finished Blanket Storage & Shipping
Second Floor—Waste Sorting & Packing
Third Floor — Finished Blanket Storage

5 Basement — Shipping Supplies Storage
First Floor—Receiving and Shipping Dock
Second Floor—Finished Blanket Storage (in cartons)
Third Floor — Finished Blanket Storage (in cartons)

6 First Floor—Dye House 2—600 pound Riggs & Lombard stainless steel Dye Kiers, 1—Sargent Squeeze Roll Extractor, 1—500 pound per hour Sargent Dryer
Second Floor—Store Room for Repair Parts & Supplies

7 First Floor—Weighing and Mixing Dyes
Second Floor—Store Room for Repair Parts and Supplies

8 First Floor—Raw Grease Wool Storage
Wool Opening, Scouring, Drying, and Burr Picking
Second Floor—Scoured Raw Stock Storage, Dyed Raw Stock Storage, Blending for Dyeing, Blending and Picking for Card Room (Pickers are Proctor and Schwartz, super high speed, 6000 pounds per hr.)

9 First Floor—Warp Room—Warping and Beaming, 3—high speed Warp Compressor Spoolers, 3—Dresser Reels, 3—Warp Compressor Beamers. All machines operated by individual motors and Reeves variable speed drives.

10 First Floor—Full Beam Storage

11 First Floor—Empty Beam & Yarn Storage

9, 10 & 11 Second Floor — Card Room — 9 cards, with space for one additional. All cards equipped with burr-crush rolls, tape condensers, and Scotch intermediate flat feeds.

12 Basement — Carbonizing, Fulling, Scouring, Extracting, Drying, Piece Goods Dyeing, Piece Goods Bleaching
First Floor—Weaving—27—W3 Crompton & Knowles High Speed full automatic Looms; 21—110 inch Broad Looms, 2 — 110 inch Jacquard
Second Floor — Spinning Room — 16—Whitin Model E, 120 spindle, large package, spinning frames

13 Basement—Napping and Inspection—8—Napping machines, 4—Blanket Cloth Inspection Tables

First Floor — Rewinding-Weaving, 2—45 spindle Abbott filling rewinders equipped for large package bobbin and four color separator. 10—Crompton & Knowles manual looms for 5 and 6 color plaid flannel weaving. 12—Schweiter Automatic Filling Winder units. Weave Room, Weighing, Measuring and Inspecting.

Second Floor — Steaming Filling Yarn, Yarn Storage

14 Basement—Burling and Mending
First Floor — Future Dressing Rooms & Toilets

15 Basement—Dry Finishing Piece Goods, Flannels, Cloth Inspection, Shearing, Pressing, Bolting and Rolling, Shipping of Cloth

16 Machine Shop

17 Boiler House—2—1700 pound per hour, continuous rating, Combustion Engineering V U, Water Tube, Water cooled Walls, operating at 125 pounds pressure. Spreader type stokers

18 Below Grade, Coal handled by gravity from coal truck to storage

WT Elevated Water Storage Tanks

WST Underground Water Storage Tank

P.H. Pump House for Processing Water

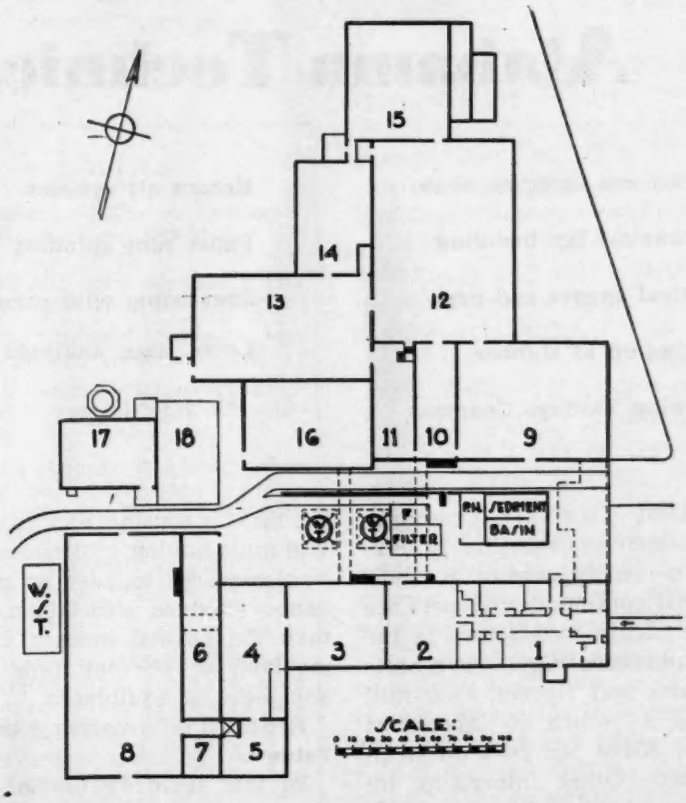


TABLE 1

Mill Experience with Continuous Strippers

	Stock	Lbs./Hr.	Grinding Time	Stripping Time	Breaking Strength	Waste	Card Settings After Grinding
Mill 1	15/16"-1⅛"	6.39-13	No change	With stripper, 1 in 8 hrs. Without stripper, 3 in 8 hrs.	No Change	Cylinder strips reduced 80%. Flat strips reduced 28%. No change in motes and fly.	No change
Mill 2	1"	16	Grinding schedule from 9 days to 16 days. Grinding time reduced from 8 hrs. to 3 hrs.	With stripper, cylinder stripped every 144 hrs., doffer every 24 hrs. Without stripper, cylinder and doffer stripped every 4 hrs.	No Change	Fly reduced .26% (Perforated screen)	Set doffer, comb, and continuous strippers
Mill 3	15/16"-31/32"	11.13	Normal 480 hrs. With continuous strippers 1200 hrs. (experimental)	With strippers, cylinder stripped every 480 hrs., doffer every 24 hrs. Without stripper, cylinder and doffer stripped every 4 hrs.	No Change	No change. Readjusted settings to maintain same percentages	Set card entirely after every other grind.
Mill 4	1"	14	No change	No change	No Change	No change	Set up after each grinding.
Mill 5	1 1/32"	11.52	No change (240 hrs.)	50% less time stripping doffers 66% less time stripping cylinders	No Change	40% saving on strip waste. Saving on labor, $5640 per year.	Set flats one round and backs the next.

Alabama Technical Meeting

Continuous strippers okeh

Mechanical lap handling

Vertical opener and neps

Piecing-up at slubber

Drawing Yardage Counters

Return air systems

Paper tube spinning

Preventing wild yarn

Loom stops analyzed

Staff Report

Overhauling fly frames

Anti-friction spindles

Scheduled doffing pays

Air change in spinning

Mechanical roll picking

ALABAMA Textile Operating Executives, meeting in Birmingham on November 6, indicated that continuous strippers are proving highly satisfactory in the mills, substantiating their reports with facts and figures. One mill reported a return in labor cost alone of $5640 per year on stripping costs. Other interesting information showed that the grinding time is considerably extended. The mills having continuous strippers appeared to have no maintenance troubles with them, other than the normal amount of time involved in learning how to set any piece of equipment.

Reported information is given in **Table I.**

In this same discussion an interesting sidelight was given on an extended test in grinding and comparing nep-count. Just after grinding the nep-count was .42 per inch; at 120 hours the nep-count was .47; at 600 hours the count was .69 per inch, remaining at .69 until 1008 hours, when the cards were reground.

Considering the effects of the vertical opener on both number of neps and the effect of the vertical

TABLE 2

Results With and Without Vertical Opener (Neps and Curled Cotton)

1. When one fan speed is too low, it will curl the cotton. With proper fan speed get good cleaning with verticals.
2. Experiments indicate that by removing vertical opener from opening line there is 13% reduction in neps. (Standard opening equipment for this mill: blending feeder, vertical opener, No. 11 condenser with No. 6 air filter, No. 12 lattice opener to pickers.)
3. Unable to prove difference in neps with and without vertical opener in line. Blade beaters on the pickers remove more waste than carding beaters, but account for only small reduction in neps; blade beaters on pickers make more waste laps (uneven and fluffy). Elimination of one opening process would not have same effect in mill which cards 8 to 10 pounds per hour as mill running 16 pounds per hour.
4. Replaced vertical opener with Superior cleaner. No change in neps, but decrease in curling of stock.
5. Vertical opener speed of 600-700 rpm best; higher speeds caused curled cotton.

TABLE 3

Comments on Return Air Systems in Opening and Picking

1. Return air condenser in opening and waste room satisfactory. If too many fans are tied in to one condenser it causes a back draft.
2. Return air system reduces fire hazards and assists in controlling fires. Dust easily dumped in box. Disadvantages are back draft on pickers, dust in room, heat in room, more maintenance and cleaning.
3. Air filter bags require attention for cleaning (every 8 hours to prevent back draft). More dust in card room since installing filters in opening (no difference in opening room). Fine dust filters through bags.
4. Less heating required in winter.

Table 4

Do You Piece-Up Runouts in Cans at Slubber?

Mill 1. Piece-up after creeling to prevent reworkable waste.

Mill 2. Piece cans are spliced and creeled in at end of frame to handle breakbacks with less effort. On Middling cotton piece cans run through breaker drawing (one piece can to delivery).

Mill 3. Piece cans creeled into full cans and re-run on finisher drawing (one per delivery).

Mill 4. Prefer to re-run pieces through drawing.

Mill 5. Piece-up runouts and run at slubber. If over 10 pounds per creel, run back through finisher drawing (one end to delivery).

Mill 6. Piece-up runouts at slubber.

Mill 7. Piece-up runouts at slubber.

Mill 8. Pieces go back as waste.

Mill 9. Piece-up runouts at slubber.

Mill 10. Piece-up runouts at slubber.

Mill 11. Pieces re-run in drawing.

opener on the stock, comment indicated that speeds are a controlling factor. Comments briefed are given in **Table 2.**

Lap Handling System. One mill man described a mechanical system for transporting picker laps to the card room, whereby the laps are removed manually; the reporting mill man expects further refinement of this system so that the laps are placed on the card racks automatically. The system described closely resembles in principle the one described on page 71 of the August 1948 issue of TEXTILE INDUSTRIES, reprints of which are available.

Comments on return air systems in opening and picking are shown in **Table 3.** When filter bags are used, evidence presented indicated that they perform in a more satisfactory manner when they are cleaned frequently.

Table 4 shows Alabama mill practice with reference to piece-ups on drawing stock at the slubber, and **Table 5** lists experience with yardage counters on drawing.

Several methods were offered for maintenance of fly frames; see **Table 6** for outline of system in use at one mill, and **Fig. 1** for "Fly Frame Weekly Report" for section men's guidance and for follow-up.

Anti-Friction Spindles and Adapters for Paper Tubes. Several mills reported experience with this type of equipment. The answers briefed are as follows:

TABLE 5

Comments on Use of Yardage Counters on Drawing

1. Have full can knock-off and sliver runs out very evenly.
2. With yardage knock-off can put desired amount in can.
3. With yardage knock-off contents of cans satisfactorily uniform.
4. Using yardage knock-off have only four or five cans to piece-up (these due to ends down in drawing).
5. With yardage counters, 15 pounds of pieces; with mechanical knock-off, 79 pounds of pieces.
6. With yardage knock-off there is evenness of run-out, so no need to piece-up cans except for break-backs.
7. Use yardage knock-off but still have piece-ups.

Mill No. 1. No anti-friction spindles; have adapter type spindles and straight paper bobbin. No change in ring (2⅛"); stroke changed from 4¼" to 5½". Use Barber-Colman spoolers and notice no difference between the paper bobbin and wooden bobbin at spooler. Blow spoolers off thoroughly each shift.

Mill No. 2. Anti-friction spindles on warp frames. Changed from 7½" stroke to 8¾" stroke. On 17s changed from 2" rings to 2¼" rings; on 13s changed from 2¼" to 2½" rings. No saving in power due to larger package change; spindle speed same. Mill now changing to wooden bobbins. Use Barber-Colman spooler and by changing build on bobbin no changes at spooler were necessary. Of total warp and filling breaks, causes by lint 9.63%; tail ends 3.59%; spun in 2.78%.

TABLE 6

Overhauling Fly Frames

Mill No...... **Dept.**..... **Date**.....

Frame No...... **Time Started**.....**A.M.**.....**P.M.**

Step No. 1:

1. Have frames doffed .....
2. Remove drive belt .....
3. Remove top rolls .....
4. Remove all draft gear and studs .....
5. Draft gear head end and gear cap.....
6. Lay out steel rolls .....
7. Remove bottom clearers .....
8. Check all gears, studs and rolls ..... Stands .....
9. Replace rolls; and check settings .....
10. Check and replace clearers .....
11. Line and level frames in general roller, Sampson, and stands .....
12. Rebuild draft gear head .....
13. Check traverse motion and traverse motion gears .....
14. Check creel, lifting roll and gears .....

Step No. 2:

1. Take off flyers, clean and check pressure .....
2. Take out spindles and clean .....
3. Clean and check bobbin and spindle shaft.....
4. Check bobbin and spindle shaft..... Bearings and gears .....
5. Mop out bolsters .....
6. Check horse head gear and bearing.....
7. Clean and check spindle steps .....
8. Place spindles back and plumb.....
9. Line and level carriage .....
10. Place spindle gear on spindle.....
11. Set spindle and bobbin gears.....
12. Put grease in bearings.....
13. Check lifting shaft, rockers, rollers and bearings .....

Step No. 3:

1. Check pulleys .....
2. Check out rigging bearing .....
3. Check jack shaft and bearing .....
4. Check compound .....
5. Check bobbin and spindle chain drive.....
6. Check twist gear and twist gear train.....
7. Check top comb and gear .....
8. Check bottom comb and gear .....
9. Check lay chain and chain gears .....
10. Check rack gear and comb belt .....
11. Check builder dog, jaws and screw.....

Note: Work performed twice yearly. When the overhauling of a roving frame has been completed, the amount of parts used by name are recorded and condition of the major items that were not replaced are used for reference.

FLY FRAME WEEKLY REPORT CARDING DEPT.

Sect. Man..... Date .....

Roving Traverse
Clearer Weights
Weight Levers Set
Weight Chains
Gear Casings
Backlash
Starting Tension
Carriage Traverse
Doff Size
Flyers Checked
Lift Rolls
Bobbin Build
Bolster Rail
Step Rail
Top Roll Setting
Shippers
Steel Rolls Cleaned
Top Rolls Cleaned
Spindle Tops Cleaned
Chokes Off Spindles
Bolsters Oiled
Bobbin Gears Oiled
Spindle Steps Oiled
Roll Stands Oiled
Top Rolls Oiled
Backs Oiled
Compounds Greased
Fire Buckets Filled
Fire Guns O K
House Cleaning
Oil Cups & Brushes

Fig. 1. Frames are prorated so that each shift section man will have an equal number to inspect and maintain. Card is filled out and turned in at end of each week; failure to check conditions requires explanation on card. Follow-up is made to check on section man. Frames at this mill are overhauled thoroughly every 18 months.

Mill No. 3. Equipped with both roller and ball bearing spindles on tapered paper bobbins. On some of both roller and ball bearing spindles traverse increased from 9″ to to 11″ (bobbin length from 10″ to 12″); diameter of ring from 2½″ to 2¾″ on 8s to 15s yarn. Other group of ball bearing spindles, bobbin length increased from 8″ to 10″ and traverse from 7″ to 9″; 2¼″ ring not changed.

Power test showed 13.47% less power for roller bearing spindles as compared with conventional spindles. (On one frame new roller bearing spindles tested immediately after installing and power increased, but after running 24 hours power dropped to 13.47% less.) On frames increased from 8″ to 10″ bobbin and keeping 2¼″ ring, spindle speed increased from 8400 rpm to 8820 rpm. Estimate that paper bobbins run about two-thirds as long as wood bobbins. Discards of paper bobbins then not due to being worn out, but fact that paper bobbins are easier bent out of shape. Mill not as likely to continue running defecive paper bobbins as wood bobbins because damaged paper bobbins will not fit spindle. Tapered paper bobbin wound on Abbott winders and on Barber-Colman spoolers; no apparent difference in winding or spooling. Bobbins are cleaned by cutting yarn off.

Roller-Pickers Job Using Mechanical Picker. This question closely approximated a survey made by TEXTILE INDUSTRIES, report on which was made in the December 1946 issue. Current procedure and

BRADSHAW SPEAKS

"What goes on in the hearts of men determines the success or failure of the business enterprise," H. Grady Bradshaw of Lanett, Ala., told the Textile Operating Executives of Alabama at the fall meeting in Birmingham. Mr. Bradshaw, long an advocate of good industrial relations, emphasized that all men have the same desires and aspirations, whether they are rich or poor, and that the most important mechanism on earth is good human relations. Calling on management and foremen to recognize the operative's position and feelings when dealing with him, he pointed out that to the operative, company policy and the company is the first line of supervision. "No job in the mill should be considered inconsequential," Mr. Bradshaw said, and cautioned that one of the responsibilities of a good foreman is to show the operatives down-the-line the importance of each and every job.

TABLE 7

Guide List for Preventing Wild Yarn, Spun Ends and Lint on Barber-Colman Warpers and Spoolers

1. Set snick plates as closely as possible.
2. Spooler tenders keep loose yarn picked off snick plates, and pockets.
3. Blow off spooler each 4 hours; warper creel each beam.
4. Blow off stored yarn before it is used.
5. Train spooler tenders in the proper disposal of short pieces of yarn.
6. Have spinning doffers tie down yarn 1" from bottom of bobbin.
7. Have spooler tenders break off long tails on bobbins.
8. Keep the rotary brush on the traveler clean.
9. Keep wild yarn shears in good shape.
10. Keep slack tube clean.
11. Discard or correct worn or rough spools and beams.
12. Check knotter tying regularly.
13. Maintain correct settings on detector springs, pressure lever, springs, and rise rolls.
14. Require the operator to kink ends of cheese starters when they are placed on the spooler.
15. Keep cheese arms lined properly, replacing all crooked arms.
16. Have warper tender check each creel for loose ends in drop wires.
17. Good housekeeping is essential for clean work.

job loads reported by the Alabama mills is as follows:

Mill No. 1. Each shift 2,700 spindles per roller picker. All three lines of top rollers, stands, steel rollers are picked; also around aprons, cradles, and stirrups. 13 frames of back top clearers are cleaned by hand each shift (revolving front clearers). Warp count 16.50s, filling 9.50s.

Mill No. 2. Per roller picker, 5,700 spindles. Duties include only picking rolls with roller picker.

Mill No. 3. Roller-pickers job 2,400 spindles. Each warp frame picked once each 24 hours. 9.50s yarn. Clearers cleaned by spinners.

Mill No. 4. Job 2,400 spindles in 8 hours. Yarn counts 12s to 25s. Cycle, three times in 40 hours.

Mill No. 5. Job 3,584 spindles. Pick top clearers, top rollers, middle steel rollers, and stands, every 48 hours. Warp 31s, filling 42s.

Mill No. 6. Mechanical roll pickers are scheduled 4,320 to 4,536 spindles per job. Get top and bottom rolls of 4 frames every 24 operating hours. Get 10 frames, top rolls only, every 24 operating hours. Other cleaning by hand.

Mill No. 7. Job load: control rolls, 15 sides; stands, 6 sides; top revolving clearers, 6 sides; back scavengers, 10 sides; 3 lines top

TABLE 8

Loom Stops Caused by Spun Ends, Wild Yarn, Etc.

74 x 32; 11.58 warp; 6.68 filling
46 x 32; 4.75 warp (plied); 4.78 filling

Total loom hours tested, 3,285.

Total warp stops all causes, 4,042.

Warp stops from spun ends, 10.09%.

Warp stops from wild yarn, 2.70%.

Warp stops from loose lint, 19.20%.

Stops per loom hour from spun ends, .124.

Stops per loom hour from wild yarn, .056.

Stops per loom hour from loose lint, .236.

TABLE 9

Advantages Cited for Scheduled Doffing in Spinning

1. More frames doffed per hour.
2. Have the actual time required to fill bobbins on frames on all yarn counts.
3. Smaller percentage of frames are stopped ahead of doffers.
4. No frames stopped because of shift changing.
5. More uniform bobbins of desired weight.
6. Better production at spoolers because of uniform weight of spinning bobbins.
7. Can work out better job loads for doffers.
8. Can pay doffers by frame with no difficulty in checking them.
9. Fewer short doffs.

TABLE 10

Experience After Installing Air Change in Spinning

Mill No.	Increased Relative Humidity	Relative Humidity Run with Air Change
1	Yes	54%
2	No, but get better control	9s-16s warp, 60-65% 20s-25s warp, 50-55% 3½s-20s filling, 65-70%
3	No	55%
4	Yes	55-60%
5	No, but get better control	55-58%
6	No	54%
7	Yes	55% cold weather 50% hot dry
8	Yes	60-65%

rolls, 24 sides; steel rolls, 4 sides. This schedule gets control rolls cleaned every 48 hours, stands and back scavengers every 120 hours, top rolls every 24 hours, and steel rolls every 144 hours.

A guide list was offered for preventing wild yarn, spun ends, and lint on high speed Barber-Colman warpers and spoolers. See **Table 7.** One mill had prepared a report on loom stops caused by spun ends, wild yarn, etc., and this is given in **Table 8.**

Adequate cleaning schedules were said to be essential in preventing wild yarn and lint from getting into the work. Other suggestions to prevent this were to blow down while machines are idle, blow off stored yarn before spooling, and keep a high polish on the floor at the warpers so that the lint will slide along the floor instead of collecting and whipping into the work.

In a discussion of scheduled doffing in spinning, many advantages were claimed, with no disadvantages being mentioned. A summary of the points of advantages is given in **Table 9.**

Table 10 cites the experience of eight mills with air change system, with specific reference to percentage of relative humidity run.

The meeting was opened with an address by Grady Bradshaw of Lanett, Ala., who stressed the ever present need for an understanding of human relations in industry. The technical program was in charge of C H. Moody of Dwight Mfg. Co., Alabama City, who is general chairman of the association. Discussion on carding was led by J. V. Nelson of Avondale Mills, Alexander City, Ala., and the roundtable on spinning was presided over by T. H. Floyd of Opelika (Ala.) Textile Mills, Inc.

Mr. Nelson was also elected for a term on the executive committee, as were Henry M. Johnson of Buck Creek Cotton Mills, Siluria; and Ted Bennett of Dallas Mfg. Co.

Textile Industry Berated for Research Lag

FOUR HUNDRED leading textile management and research executives attending the 19th annual meeting of the Textile Research Institute in New York heard their industry harshly indicted for its sluggish scientific efforts by Maurice Holland, prominent industrial research advisor.

Mr. Holland, speaking in the Grand Ball Room of the Waldorf-Astoria Hotel following the luncheon of November 19th, identified the textile industry as "the caboose on the train of technological progress." This severe criticism came as an aftermath of a previous session in which Theadore Felner of Macy's, Angeline Dougherty of *Vogue Magazine,* Pierre Sillan of Glen Raven Cotton Mills, and Dr. Milton Harris of Harris Research Laboratories, presented their cases for the immediate need of new and better textile products.

Contending that conservative textile industrialists must shake off the shackles of tradition if they are to face the competition of synthetics, Mr. Holland recommended increased expenditures for research.

Only a handful of mills are responsible for recent textile developments, Mr. Holland said. On this basis the industry can't be vindicated from charges of research negligence. Although the textile industry has experienced a 115% gain in laboratory facilities between 1940 and 1946, this is still "far behind the national average in rate of growth" for all other industrial laboratories.

Mr. Holland claimed that the major weakness of research in the textile industry stemmed from the poor relation with production and sales which management has accorded it. The position of the research director in the corporate structure should be at the same level as any other executive in the organization and could be entitled to the rank of "vice-president of the future."

Mr. Holland proposed that four leaders representing management and an equal number of research executives should confer monthly for a period of two years to coordinate industry and technology in the textile field. By such concerted effort expenditures for research would become "the best form of industrial insurance; for jobs in a depression, for cutting costs to pass on to the consumer, and as the best safeguard for long term investment of stockholders."

The Influence of Mixed Fibers
on Yarn and Fabric Design

By ROY WOOD*

Market Development Division
Courtalds Ltd., Canada

Suggestions are offered to aid designers in the selection of fibers to obtain given characteristics in the finished yarns or fabrics.

IN RECENT years there has been an increasing tendency on the part of the designer to make use of blend yarns and fabrics, using two or more different types of fibers. The trend has been toward the production of yarns spun from a variety of fibers. Possibly the main driving force in this development was given by the amazing versatility which accounted for the rise in popularity of man-made staple fibers, together with complementary improvements in machinery and techniques.

Some suggestions of benefits to be obtained and the fiber to be selected for blending are listed in the accompanying table.

None can claim to have more than scratched the surface in this technique, but by constant effort, vital basic rules are being evolved so that ultimately the competent designer will have at his command all the potential wealth of the skilled engineer. No longer need he complain "I had to use that because I could not get just what I wanted." He will measure the characteristics and the fiber which he desires to use, sift out its weaknesses, and search for a fiber that has strong characteristics to offset those weak points.

The Worsted Trade. One of today's problems is the production of merino qualities with inadequate wool supply. It is true that crossbreds never give the same effect, but at least it can be approached if sufficient fineness of yarn and texture can be achieved. A simple method is to dilute the available crossbreds with "qualities" of synthetics even finer than the quality of merino which would normally be used, and thus arrive at a strong weavable yarn, in which the harshness of the crossbred is suitably modified by the softness of the synthetic. Here are some interesting examples of where a synthetic of about 90's quality has been introduced into

EFFECTS OF TYPES OF FIBERS ON YARN AND FABRIC BLENDS

(Left hand column indicates yarn of fabric characteristics desired. Opposite desired characteristic is type of fiber to be used to secure effect.)

Blend Benefit Required	Blend Method—Dilute with:
To obtain strength when you are already using (a) Coarse fiber of varying staple. (b) Coarse fiber of short staple. (c) Fine and weak fibers.	 (a) Finer fibers of uniform staple. (b) Longer fibers of fine staple. (c) Strong fibers of fine staple.
Volume or loft	Short and coarse fibers and those of low specific gravity and high crimp.
Leanness or a "worstedy" character	Long and fine fibers
Wear Resistance	Coarse fibers
Rigidity	Coarse fibers
High Luster	Long and coarse fibers
Low Luster	Short and fine fibers
Drape or "Bendability"	Long and fine fibers
Water Resistance	Coarse and long fibers
Resistancy	Short and mixed coarse and fine fibers
Shrinkage resistance	Short and coarse fibers of random dispersion and low twist
Anti "pill" raised cloths	Mixed coarse and fine of medium length

*Abstract of paper presented at Canadian Textile Seminar.

blends with various qualities of crossbred wool and even coarse hairs in this manner.

The Woolen System. Many woolen manufacturers attempt to simulate a coarse worsted spun yarn on wool machinery. His aim is to produce a finer yarn, of greater strength and sheerness than is customary on his equipment.

One of the fundamental weaknesses of woolen spun yarns is unevenness and the presence of weak spots. This is primarily due to the haphazard distribution of fibers in the yarn. However, it is also exaggerated by the use of wool having an irregular length of staple.

By blending in a small mixture of staple having a fiber length in excess of the staple length of the wool (the precise length for each condition may be found by trial and error), the longer staple will tend to take the strain during drafting and will spin to the core of the yarn. Thus there will, in effect, be a strengthener at the core, and the short fibers will tend to be thrown to the surface by centrifugal force.

The Designer-Mechanic. It is obviously essential that the designer should have a thorough knowledge of:

1. The properties of fibers.
2. Ability to interpret these properties into specific mechanical performances of yarns and fabrics.

When a mechanically superior texture is being designed, certain data is vital. Some of the information considered essential is:

1. The geometric form of the fibers available, i.e., what are the fiber diameters; what is the average staple length, and the variation in length.
2. The stress strain characteristics of the fibers to be employed.

Breaking Strain and Elongation. Operating loads may be measured to reveal that the point of failure is at 20 per cent of breaking load. One fiber may be very good at break and somewhat poor at 20 per cent of break.

Assuming that we know that permanent deformation occurs on a fiber when a load is applied, such as the bending of one's knee with consequent bagging, can a fiber be blended into the yarn having a high resistance to the actual load of bending the knee, but not necessarily a great deal higher at break?

Correction

In the report of the First Canadian Textile Seminar, which appeared in the December 1948 issue, the author of the paper "Wear Resistance of Fibers" should have been listed as J. R. Stewart of the Provincial Institute of Textiles, and not J. R. Dunkerley. Mr. Dunkerley's article on "The Continuous Stripper" was properly identified.

Calculations in Blend Yarns and Fabrics. Some suggestions as to how minimum yarn strength may be predicted when laying down a fiber blend are given. The calculations have been devised by technical men who have taken the trouble to find short cuts.

Sooner or later emerges the problem of determining the finest count which may be spun from a given fiber. For the natural fibers, this problem has been solved by a few decades of trial and error. The spinning limits of 56's wool, or 1 1/16-inch American cotton is generally known, but rayon has brought a change to which a great number of textile men are not yet accustomed. To permit the prediction of the spinning limits of the various types of staple fiber, the following formula has been devised. For all fibers, the fineness of spinning is obviously dependent on two prime considerations, those of fiber diameter and fiber length.

First, it is necessary to determine the fiber diameter in microns, one micron being one-thousandth part of a millimeter, or approximately one twenty-five thousandth part of an inch. Assuming the fiber has a round cross section, this is obtained by the following expression:

$$\text{Diameter} = 20 \times \sqrt{\frac{\text{Denier}}{3.14 \times \text{specific gravity}}}$$

Aproximate specific gravities of various fibers are as follows:

Viscose	1.5
Cotton	1.5
Acetate	1.3
Wool	1.3
Nylon	1.14
Flax	1.5
Vinyon	1.35

Second, it is necessary to bear in mind that there must be a minimum number of fibers per cross section in order to provide adequate weaving strength. For the various systems, these minima may be set at:

Cotton spinning	56
Woolen spinning	125
Worsted spinning	70

This should provide a skein strength product of from 1200 to 1500 which is satisfactory for weaving. By "strength product" we refer to the product of breaking strength in ounces and count. A factor results which is equally adaptable for all counts of yarn.

Third, it is required to establish the ratio of staple length to fiber diameter. To do this it is necessary to convert staple length to microns, by multiplying length in inches by 25000.

To allow maximum strength and nep free spinning, a desirable ratio should be approximately 3200 for fine counts, and 3000 for coarse counts.

Fourth, to determine limits:

$$\frac{\text{Desirable ratio} \times \text{desirable fibers/cross section}}{\text{actual ratio} = \text{actual fibers/cross section}}$$

Denier of fiber × fibers per cross section = total denier of yarn . Convert total denier to count system required for actual count spinnable.

Where mixed fibers are used, for example the use of 1½ den. and 3 den. fibers of equal length, it is advisable first to calculate the average denier of the fiber used.

When spinning a blend of 50 per cent 1½ den., and 50 per cent 3 den. fibers, it is not possible to say that the mean of 1½ and 3 is 2¼; therefore the average denier is 2¼. A closer study will show that since the 3 den. fiber is twice as heavy as the 1½ den. fiber, for an equal weight there will be twice the number of 1½ den. fibers as 3 den. fibers, given lengths. Therefore the average denier should be the mean of 1½ + 1½ + 3, which equals 2.

This may be expressed as:

$$\frac{\%\ \text{Fiber Type A}}{\text{den. A}} + \frac{\%\ \text{Fiber Type B}}{\text{den. B}} + \frac{\%\ \text{Fiber Type C}}{\text{den. C}} = \frac{100\%}{\text{Average den.}}$$

Developments in the Application of

Leucoesters of Vat Dyes on Wool

By DR. HANS LUTTRINGHAUS

General Dyestuff Corporation

ABSTRACTS of several of the papers presented at the convention of the American Association of Textile Chemists and Colorists appeared in the December 1948 issue of "Textile Industries."

Included were: "Stability of Vat Colors at Elevated Temperatures," the winning paper in the AATCC intersectional contest by the Piedmont Section; "Trends in Piece-Goods Preparation" by C. Norris Rabold; "Effect of Temperatures on Finishing Compounds" by Arthur H. Noble, Jr.; "An Evaluation of Soaps and Synthetic Detergents" by Margaret S. Furry, Verda I. McLendon, and Mary E. Aler; "Effect of Sulfur Black on Tendering of Cotton Yarns" by Southeastern Section; "Some Conditions Affecting the Application of Vat Colors" by Rhode Island Section; and "Cotton Plans a Research Program" by Dr. Leonard Smith.

Herewith are abstracts of five other papers presented.

THE leucoesters of vat dyestuffs are stable water-soluble products which exhaust on the fiber from neutral or acid baths. The cotton dyer and printer have used the leucoesters of vat dyestuffs under the name of Indigosols or Algosols.

With higher demands for fastness to washing and light for wool goods, shrink-resistant wool in particular, leucoesters begin to find increased interest among woolen and worsted manufacturers.

Affinity. The water-soluble Algosols have much more affinity for animal fibers, such as wool, than they do for the vegetable fibers, such as cotton. Normal methods of controlling affinity have different effects on wool, as compared with cotton.

Raising the temperature increases the affinity of Algosols for wool, but decreases it for cotton. Salt has little effect on the affinity of Algosols for wool, and may even cause retardation.

Behavior on Wool. In their dyeing behavior toward wool, the Algosols resemble the acid dyes. The rate of exhaustion is increased by the addition of acid and by increasing the temperature. The kind of acid and the amount of acid must be given careful consideration to avoid unlevelness. The dyes are fixed on the fiber chemically and possess good fastness to washing on wool in their colorless leuco state.

pH Bath. Variations in the pH value of the bath can influence the exhaustion to a large degree. Batches which have retained ammonia from the scouring did not exhaust as they should.

In practice it is usually not necessary to exhaust the bath with acetic acid.

Developing. The oxidation on wool is generally carried out with sodium bichromate in the presence of sulfuric acid. Some can be developed with sodium nitrite, and a few can be oxidized with potassium persulfate. The minimum amount of bichromate is .7%, and the approximate maximum should be 2.5 to 3% on the weight of the wool.

Ammonium sulfocyanide is used to prevent over-oxidation of the leucoester.

The developing bath is prepared with the acid, the bichromate added, and then the ammonium sulfocyanide. The bath should be lukewarm. Temperature is raised to 180-190 degrees F. in 30 minutes and is kept for 30 minutes at about 185 degrees F., rinsed, and neutralized cold with 2% soda ash on the weight of the wool, which gives a pH of about 5.

High Temperature Dyeing

Presented by Philadelphia Section In Intersectional Contest

EACH of five fibers, cotton, viscose rayon, cellulose acetate, nylon, and wool was subjected to a number of experimental variables, such as thermal stability or diffusion penetration.

Thermal Stability of Fibers. Rayon and wool proved physically stable at the temperatures and times studied. Cotton, though not tested in these studies, is known to be stable. It can be concluded with fair certainty that further development of high speed dyeing will not be handicapped by fiber instability.

Both acetate and nylon may very well prove amenable to high temperature dyeing if considerably

shorter exposure times than were involved in these studies can be arranged.

Thermal Stability of Dyes. There appears to be many dyes in each class which can tolerate high temperatures. Certain individuals will prove sensitive for practical use, but in general the stabilities in this study have been adequate.

The vat dyestuffs as a class were least resistant. They were exposed in these trials to the relatively long time of 30 minutes at the high temperature of 236 degrees F. Shorter times of the order of one or two minutes and less undoubtedly would find a higher percentage of these dyes acceptable.

Relative Exhaustion. No measurements were made on fibers other than nylon and wool and for both of these fibers some dyes exhausted more completely, others no differently, and still others less completely. Therefore, more data would be necessary to obtain a good generalization.

Relative Degree of Transfer. For soluble colors there was no exception to the generalization that more complete transfer resulted from exposure to high temperatures. Many difficult leveling dyes gave evidence of behaving as level dyeing dyes at high temperatures. Therefore, the number of level dyeing soluble dyes would be considerably increased by high temperature dyeing.

Relative Fastness Characteristics. The dyed material of three fibers was subjected to fastness tests. There was usually no difference between dyeings at ordinary and high temperatures. However, vat dyes on cotton tended to be slightly inferior in general fastness properties when dyed at high temperatures.

Requirements of Petroleum Solvents in Pigmented Printing Pastes

By **ROBERT A. BILLMEIER**
Sacony-Vacuum Laboratories

OBJECT of the study is to point out in a fundamental way what is necessary with respect to composition, and therefore to a certain extent physical properties, of the solvent for optimum performance of the pigmented emulsions.

Paraffins. High concentrations of paraffins result in grainy emulsions. With a paraffin/naphthene ratio of 2:1 it is necessary to go to an aromatic-concentration greater than 20% to obtain an emulsion free of graininess, while thinners having paraffin/naphthene ratios of 1:1 or lower do not require any aromatics to produce smooth emulsions.

Though the thinner requirements are not especially stringent in obtaining a good dispersion and emulsion in an extender, they become increasingly so in obtaining the maximum body. Too high as well as too low a solvency, or aromatic content, results in a thin emulsion.

It also appears that the optimum aromatic content decreases with decreasing paraffin/naphthene ratios. At a 1:1 ratio the optimum is at about 16-19% aromatics, slightly higher at a 2:1 ratio, and apparently somewhat lower at 1:2 ratio. This last point is not conclusive from data available.

Stability of Extender. The stability of the extender is directly related to the solvent power of the thinner. Stability as measured by the squeeze test increases with increasing aromaticity. An extender with a stability sufficiently high to be considered satisfactory on the basis of performance in actual mill operation will not break when undergoing the squeeze test until it has passed through the percale a minimum of about six or seven times.

The data indicate that all of the experimental thinners of very low solvent power can be eliminated from serious consideration as having commercial possibilities since extenders prepared with them fail to exhibit that minimum degree of stability which is considered essential for satisfactory printing.

The relative concentrations of the three hydrocarbon types found in tested petroleum type solvents is important in obtaining optimum performance of the pigmented emulsions.

Supporting Conclusions:

1. The body of the emulsion is directly affected by solvent composition.
2. Both high and low aromatic concentrations result in excessive thinning of the emulsion.
3. High concentrations of paraffins especially at low aromatic levels result in unstable as well as thin emulsions.
4. The stability of emulsions is greatest at high aromatic and/or naphthene concentrations, but such increased stability is always associated with a loss in body.
5. The optimum color strength attainable is not the same for different paraffin/naphthene ratios and is greatest at a paraffin/naphthene ratio of about 1:1.
6. At a paraffin/naphthene ratio of about 1:1 the maximum strength is attained at an aromatic concentration of about 16-20%.
7. The composition which results in maximum color strength corresponds to the composition which gives the optimum balance of good body with reasonably high stability.

A Spectrographic Study of Treated Textiles

Presented by Northern New England Section In Intersectional Contest

A SPECTROGRAPHIC method has been developed in which organic textile materials are broken up into their component radicals. These radicals are then made to radiate characteristic band emission spectra. These spectra are used for:

(1) The qualitative detection of

finishes such as melamine on cotton and wool;

(2) The quantitative determination of the amount of finish on cellulose and wool fibers;

(3) The study of the interaction of resins and textile fibers, with proof that melamine type finishes do react with wool fibers and are not merely present as deposits;

(4) The identification of fibers and their mixtures, including wool, mohair, cotton, viscose, acetate, and nylon;

(5) Showing the differences in the cure of resins as a function of catalyst, curing time and temperature; particularly showing how the optimum balance between curing time and temperature may be determined to permit the maximum production of treated fabric per oven;

(6) The study of the degradation of textiles by processing and atmospheric exposure.

Solubilization of Dyestuffs with Surface Active Agents

Presented by Midwest Section In Intersectional Contest

THE DEVELOPMENT in recent years of synthetic fibers such as acetate and nylon has led to greatly increased interest in the action of surface active agents as dispersing, suspending, and solubilizing agents in dyeing.

Results. The data obtained indicate that the greatest solubilization occurs with the least soluble dyes. As a group the acetate dyes are solubilized at least in terms of percentage increase in solubility to a far greater extent than are the acid dyestuffs. Within the acetate group the least soluble, Acetamine Yellow N, is solubilized to a greater extent percentage-wise than the Scarlet B or Brilliant Blue FFS.

The addition of a surface active agent should increase the total solubilizing effect on the solution. However, the possible formation of mixed micelles from materials as dissimilar in structure as surface active agent and a dye likely prevents formation of uniform lamillar layers. The water associating effect of the sulfonic acid groups also may reduce the solubilizing properties of the detergent hydrocarbon chains.

The cationic agents can combine with the anion of the acid dyestuffs to form complex salts less soluble in water than the parent dyes. Where the acetate dyes are concerned the most important consideration is the relative insolubility of the quaternary compounds in the presence of the phosphate ion.

The highly soluble F.D. and C. colors evidently function much more like salts, and in the case of the Blue No. 1 and Yellow No. 5, at least their solubility is not appreciably changed by the anionic or nonionic detergents. The cationic agents, of course, reduce solubility by interaction with the dyes.

Conclusions. Surface active agents serve as true solubilizing agents for a number of dyestuffs in current dyeing usage. The absolute effect observed appears to be greater for the more insoluble dyes.

Micelle formation is evidently necessary to account for this phenomenon and, consequently, beyond the critical point increased detergent concentration results in greater solubilization. Salts function to lower the critical concentration of detergent required for micelle formation and, hence, for appreciable solubilization.

Dyeing trials conducted on staple nylon suggest that there may be an optimum solubility range of the dyestuff to produce the best dyeing properties, greater solubility exerting too great a retarding effect and lesser solubility giving rise to unevenness.

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Textile Research Institute Elects New Officers

New officers and directors of the Textile Research Institute were elected at a meeting of the board held during the annual meeting of the Institute on November 19.

A. G. Ashcroft, research director, Alexander Smith and Sons Carpet Company, was elevated to the post of president, and will serve as presiding officer of the board of directors.

The vice-presidency was filled by Kenneth Wilson, Forstmann Woolen Co. Richard T. Kropf, Belding-Heminway, Corticelli Co., was named treasurer. D. B. MacMaster was re-elected secretary.

Seven members were elected to the board of directors for a term expiring in 1951. They were: F. Eugene Ackerman, American Wool Council; Dr. Joseph Brant, Bates Manufacturing Co; Dr. Miles A. Dahlen, E. I. du Pont de Nemours and Co., Inc.; Bertrand Hayward, Philadelphia Textile Institute; Richard T. Kropf; Dr. Leonard Smith, National Cotton Council; and H. Wickliffe Rose, American Viscose Corp.

E. C. Pfeffer, Jr., Cluett, Peabody and Co., was appointed to fill a term vacancy ending in 1949.

Near Record Carpet Production

The Carpet Institute, Inc., has announced that production for wool carpets and rugs in the first nine months of 1948 was 67,000,000 square yards. This is a 33% increase over production for the same period in 1947.

This yardage almost equals the 70 million square yards produced during the entire year of 1941. The current production is an outstanding achievement, according to the Carpet Institute, when one considers that in 1941 the carpet industry produced more yardage than any year since 1923.

Mills Favor

Larger Packages in Weaving

Methods for changing to larger packages discussed by Georgia mill men. Loom supply costs and loom lubrication among other subjects studied.

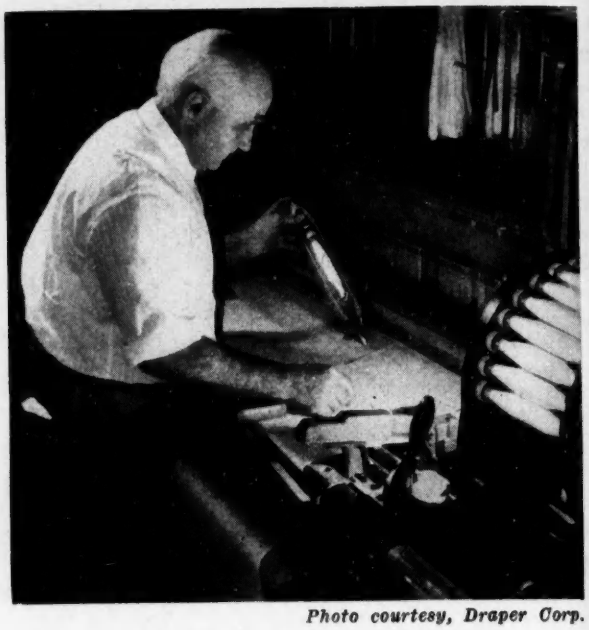


Photo courtesy, Draper Corp.

Staff Report

MOST MILL MEN are of the opinion that a changeover to longer bobbins on looms does not appreciably affect the life of the shuttle or the quality of goods produced, it was revealed at a recent meeting of the Textile Operating Executives of Georgia. Three manufacturing plants advocated cutting the shuttle in changing to a longer length bobbin, while ten others stated that changing the lay end was the most satisfactory way to make the change.

The question on the best and cheapest way to change from an 8-inch to an 8¾-inch bobbin was one of twelve questions discussed during the weaving session of the meeting which was led by George Baker of Pacolet Manufacturing Company, New Holland, Ga. [The report on the slashing forum appeared in the December issue, page 127.]

A suggestion from one mill for changing the length of the bobbin is as follows: The lay end, shuttle, and parallel should be changed. When a longer lay end and shuttle are used, the parallel should be set out from the loom side the same distance the lay end was extended. This may be done by using a space collar or by changing the parallel.

It was the consensus that a change to longer bobbins was desirable to permit the use of larger packages in the shuttles.

The life and cost of loom supplies showed considerable variation among the mills reporting on this question. The answers to this question are tabulated in the accompanying box.

Loom Lubrication. All mills reporting experience with bottle oilers or one shot lubrication systems on looms indicated successful results were obtained in terms of reduced lubricating costs and less oil on goods.

Regarding a question on costs, one mill man stated that the cost of installing bottle oilers was approximately one dollar per bearing.

It was explained that there are advantages in lubricating with the one shot system either before or after cleaning the loom. There is the possibility of missing a pressure fitting before the loom is cleaned, but if it is lubricated be-

Alterations on E Model Draper Looms in Changing to Longer Bobbins (When using cut shuttles)

1. Put on longer transfer fork.
2. Widen battery by moving small end disc on disc stud.
3. Use small pickers and remove necessary amount of packing back of pickers.

Changes on C & K Box Looms in Changing to Longer Bobbins (When using cut shuttles)

1. Put longer cross rods in magazine.
2. Put in longer bobbin cradles.
3. Remove necessary amount of packing back of picker.
4. Align magazine to boxed shuttles.
5. See that transfer hammer is properly adjusted to full bobbin.

LIFE AND COST OF LOOM SUPPLIES

Mill No.	Shuttle Life (loom hours)	Picker Life (loom hours)	Check Strap Life (loom hours)	Type Loom	Loom Speed (ppm)	Loom Width	Cost of Loom Supplies (per week)
A	1776	656	549	X2	192	40"	38c
B	1700	2182	2182	E; D	95-145	46-90"	.....
C	1600 avg.	2800 avg.	2800 avg.	E	156	34"	53c
				K	156	40"	40c
				K	130	60"	71c
				C&K	124	40"	.....
				E	156	40"	.....
				Jacq.	130	68"	3.44
				Jacq.	110	72"	
				Dobby	156	40"	70c
E	1248	925	899	X&D	108-154	.....	69c
F	1100	575	1250	X	188	40"	95c
	2200	1080	1500	XL	112	100"	50c
G	no record	.....	.....	X	180	40"	37c
				E	150	40"	21c
H	9208	.....	.....	E	160	32"	38c
I	1100	1000	925	E	145	40"	35c
J	672	2145 sgle end	3875	C3	164	38"	$1.80
		688 box end					
K	1500	2400	5200	X	180	.....	42c
L	2098	688	1275	D; E; X; X2; XL; O	.....	32-90"	.....
M	2900	1800	1600	E	160	40"	21c
	740	465	390	X	192	36"	53c
	2230	1425	1180	X	160	40"	25c
	1880	1200	1000	X2	182	44"	28c
O	.....	.....	.....	D; O	105 to 150	32" to 108"	50c
				XK; C5	184 to 182	22" to 34"	56c
R	3427	926	2160	E	172	.....	11c
S	2242	910	2668	E	160	40"	23c

fore cleaning, the surplus lubricant will be removed along with lint, etc., during the cleaning operation.

In one instance, 178 late model looms were equipped with bottle oilers, and it was found that oil costs were cut in half, and labor costs and loom supply replacements were reduced considerably. Less oil dripped on the floor, and the bottles were refilled every two to four weeks in this case.

Experiments were conducted on 2390 looms using one-shot systems and bottle oilers on all different models. All of the installations tried were found satisfactory and successful in their application. However, the organization standardized on the use of bottle oilers for E-Model loom cam and crankshafts. X-Model looms are being standardized with Alemite fittings in this mill, and an electric type high pressure grease gun is used on these fittings at regular intervals. Loom operating cost per thousand loom hours showed a marked decrease in this instance.

Another mill using bottle oilers for approximately one year indicated that the bottles were refilled once every three months by the loom fixer.

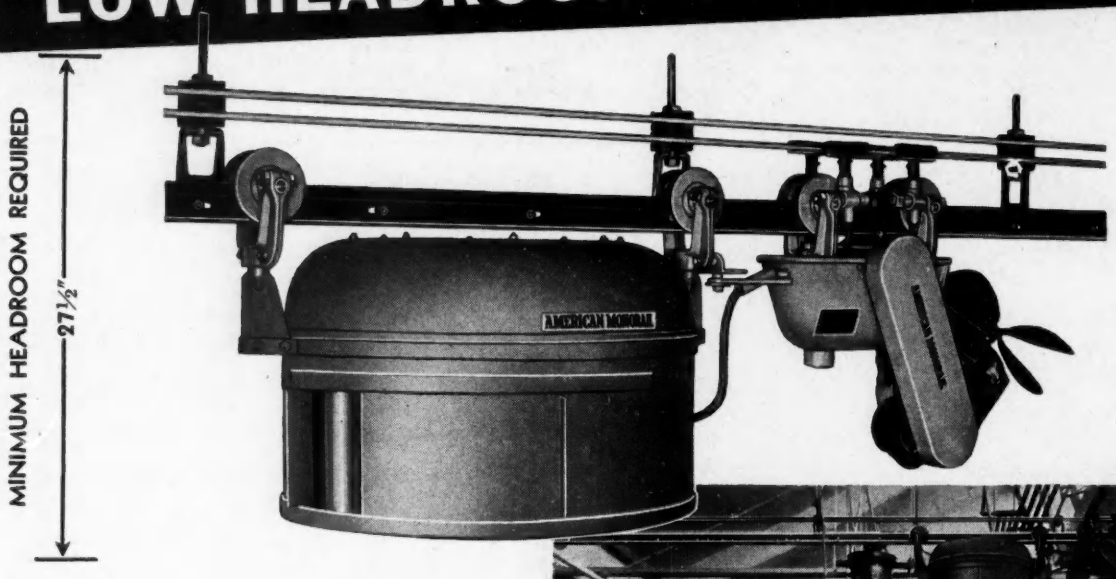
One mill man stated that the object of using one shot lubrication in his mill was to lubricate the loom regardless of whether the warp was in or out. Results were said to be good in this mill.

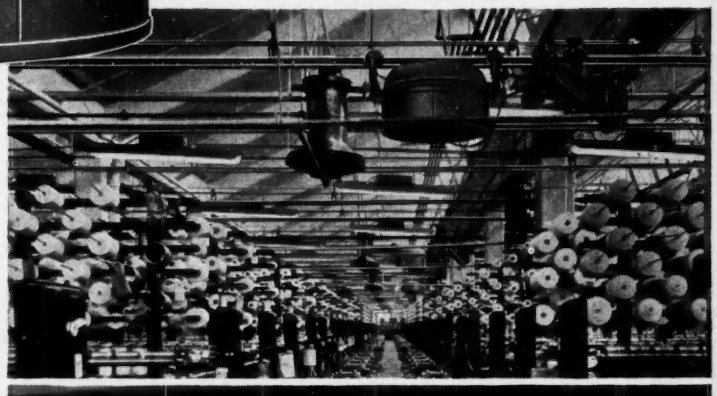
Commenting on both types of lubrication, a spokesman said that positive oiling was attained, and if bearings are in perfect condition when bottles are installed, no trouble will be experienced. No decision had been reached regarding which system is best.

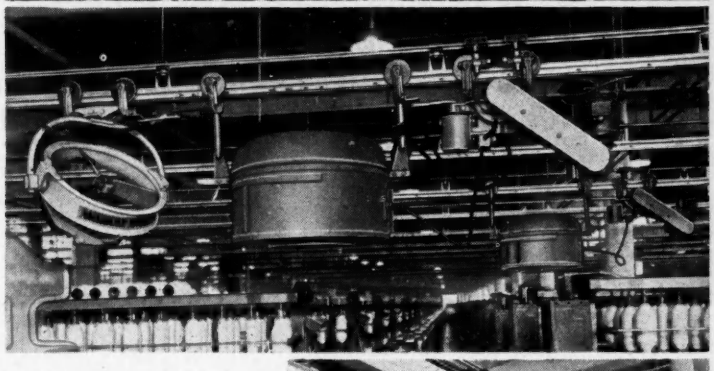
In answer to a question asked during the meeting, it was explained that all shapes and sizes of bottle oilers are available for applications in various positions.

On most of the late model looms

Automatic Cleaning UNDER LOW HEADROOM CONDITIONS



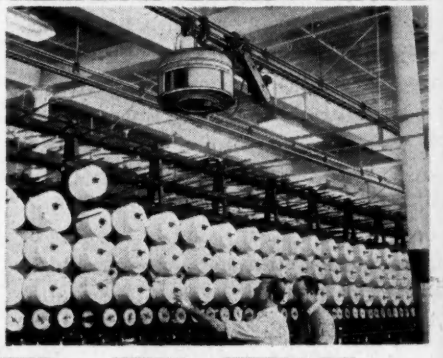




Low ceiling structures, low air ducts, low humidifying lines or any other low headroom condition can easily be met by American MonoRail Automatic Cleaning equipment. To accomplish this, the blower distributor housing is mounted as a trailer to the MonoTractor propulsion unit.

As little as 27½ inch clearance is all that is needed between the top of your twister or spinning frame creels and the ceiling. But don't bother to measure — call in the American MonoRail engineer. He will survey your mill, at no obligation, and give you the benefit of his wide experience in saving time and labor with automatic cleaning systems. It's a date if you'll write.

Send for copy of 24 page Bulletin CB-3 explaining arrangement for meeting low headroom conditions.



THE AMERICAN MONORAIL COMPANY

13106 ATHENS AVENUE **CLEVELAND 7, OHIO**

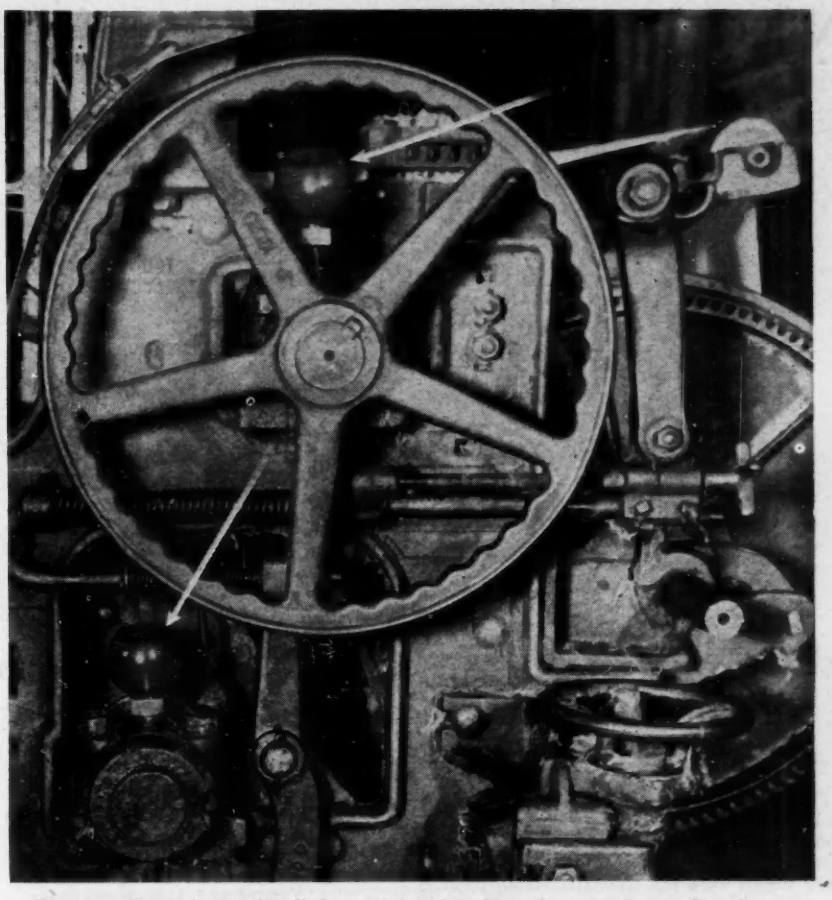
the fittings can be screwed in easily, it was said. On many of the older looms, the cap of the bearing does not easily accommodate the metal adapter in which the bottle fits. This can be remedied by filling the old oil grooves with metal and tapping them out. Some bearings on old looms are not accessible enough for bottle oilers. This mill reported good results and expressed enthusiasm about the bottle oilers.

A very thin mineral oil is recommended for use in these oilers, and it is much cheaper than the heavier oils, according to the report. Some of the looms are on two shifts (40 hours per week each shift) and the bottles run for four weeks before being refilled. Other looms on a three-shift basis (48 hours each schedule) require refilling every three weeks. The bearings were in good shape, and no excess oil was deposited on the parts of the loom or on the floor.

Streaks in Napped Fabrics. Ends that are added to the looms and do not have the same tension as the regular warp, and crossed ends on the section beam at the slasher will pull back and cause excessive tension on the yarn, resulting in streaks, according to one report. Crossed or stuck ends on the loom and variation in yarn counts were also given as possible causes of streaks in napped fabrics. Tight ends on the warper and knots, gouts, lint buttons, and rough drag rollers were also listed as causes of trouble.

Training Loom Fixers. Regarding the type of training given loom fixers when installing high speed looms, a report given at the meeting pointed out that satisfactory results were obtained by conducting a fixer's school at the plant. Three classes were held each week. The period of training lasted for eight weeks and the classes were of one hour duration each while the looms were being installed.

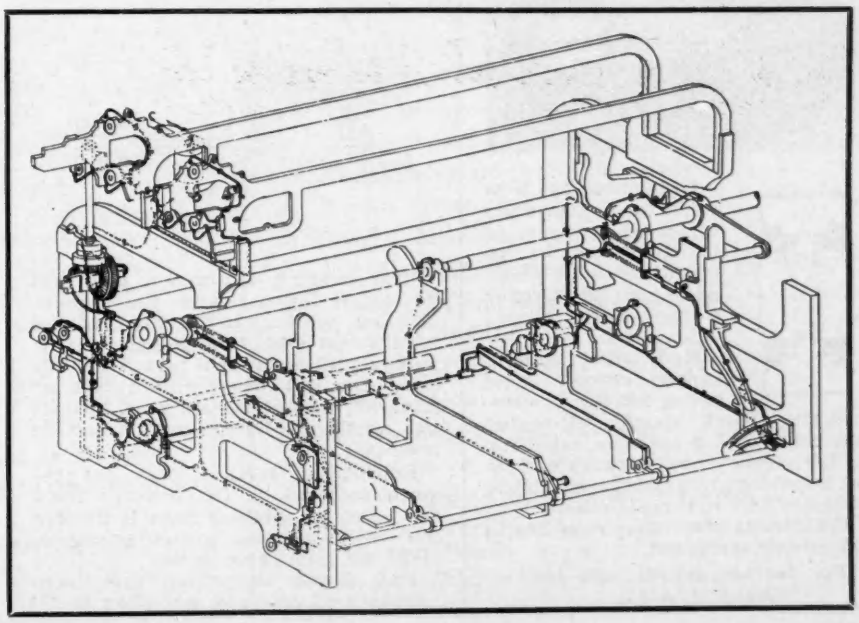
A mill superintendent stated that he obtained help from the loom erector who taught classes while he was not erecting. The classes were not restricted to any specified length of time, and it has been four years since this mill started installing looms. Classes are now being taught by fixers who are doing a good job of it. Loom efficiency has been raised from 85 per cent to 93 per cent.



Some mills are standardizing on bottle oilers in certain applications, particularly on loom cam and crankshafts. An installation of bottle oilers with visible oil supply is shown here.

In answer to a question during the meeting, it was explained that the classes are not conducted on a discussion basis. The fixers learn by assembling and disassembling

Line drawing showing a one-shot oiling system on a C & K woolen loom.



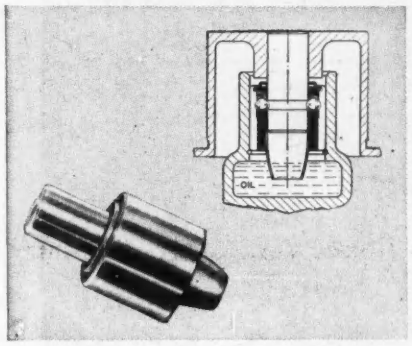
NEW DEPARTURE division of GENERAL MOTORS

BALL BEARINGS

EXECUTIVE OFFICES, BRISTOL, CONNECTICUT

BOSTON	CHICAGO	DETROIT	LOS ANGELES	NEW YORK	PHILADELPHIA	SAN FRANCISCO	AND IN OTHER PRINCIPAL CITIES
175 Ipswich	332 So. Mich.	7-122 GM Bldg.	5035 Gifford	1775 Broadway	1624 Hunting Park Av.	870 O'Farrell	

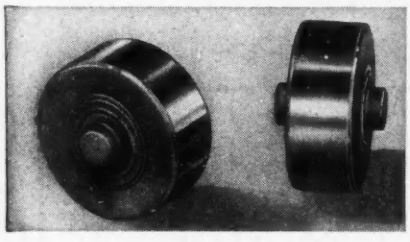
TENSION PULLEY BEARINGS

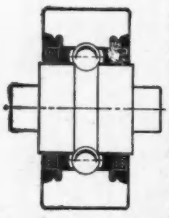


Designed for the vertical mounting of idler or tension pulleys for speeds above 1000 r.p.m. Instead of the conventional bearing inner race, a solid steel shaft extends upward enough to provide a seat for the pulley hub. To the lower end of this shaft is fitted a centrifugal pump which lifts a continuous film of oil from a reservoir and delivers it in the form of a fine spray or mist directly to the balls and raceways. The lubricant circulates but does not escape nor become contaminated with foreign matter.

For further details, ask for Bulletin A-287.

DRAPER TREADLE ROLL BEARINGS





Developed by New Departure especially for cam rollers in textile looms, in cooperation with engineers of the Draper Corporation, Hopedale, Mass.

Made with solid high carbon chrome steel races, heavily proportioned to absorb shock, self-sealed against dirt or lint and lubricated for long life, these "new departures" by New Departure practically eliminate shutdowns for roll replacements.

Field results show that cam life is considerably increased.

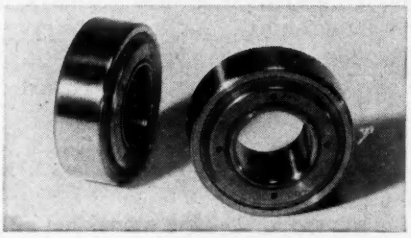
For further details, ask for Bulletin A-231.

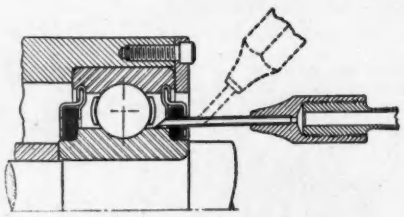
NEW DEPARTURE BALL BEARINGS

Distributors in the South:

Atlanta, Chears Bearing Co.,
Moffatt Bearing Co.
Birmingham, Moffatt Bearing Co.
Owens-Richard Co.
Charlotte, Moffatt Bearings Co.
Chattanooga, Fischer Bearing Co.
Knoxville, Fischer Bearing Co.
Tennessee Bearings, Inc.
Memphis, Southern Bearings Service
Nashville, Fischer Bearing Co.
Richmond, Moffatt Bearings Co.
Richmond Auto Parts Co., Inc.

INJECTOR SEAL BEARINGS



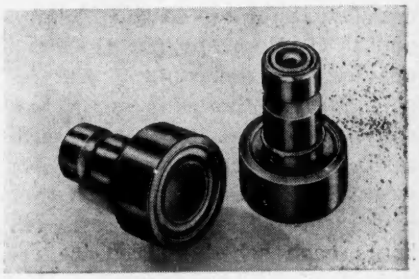


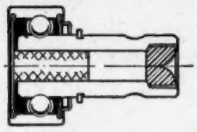
This bearing features a new seal developed for use with the popular ND Seal bearings in the standard and light series sizes. Small holes in the outer metal of the seal permit revitalizing the old bearing lubricant at intervals commensurate with operating conditions, by means of injection needles.

Lubrication method does not require removal of the bearing from the housing. Neither does it involve the use of nipples, grease passages, plugs or removable seals.

Full details describing this "new departure" given in pamphlet A-173.

TAPE TENSION PULLEY BEARING

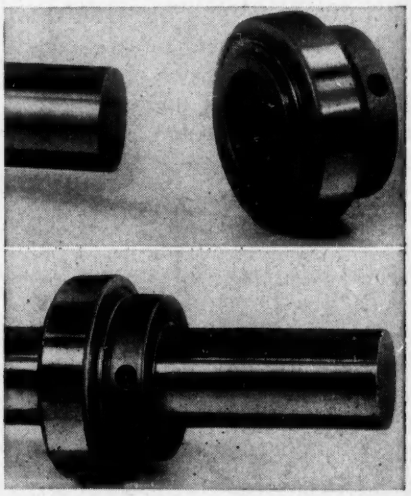




Designed for horizontal mounting of textile tape tension pulleys. Recommended for practically any installation where a pulley or a roll must give uninterrupted service with minimum attention. A few drops of oil once or twice a year fed into hollow shaft, leads through filter to sealed area around ball assembly, and revitalizes original grease.

For details, ask for Bulletin A-306.

ADAPTER BEARINGS



The New Departure Adapter bearing, Type-A, is intended primarily for use with standard cold drawn steel shafting to inch dimensions, where bearing locating shoulders and threads for locknuts are undesirable. Where a slight amount of eccentricity is permissible, they eliminate the need for grinding bearing seats to close tolerances for press fits.

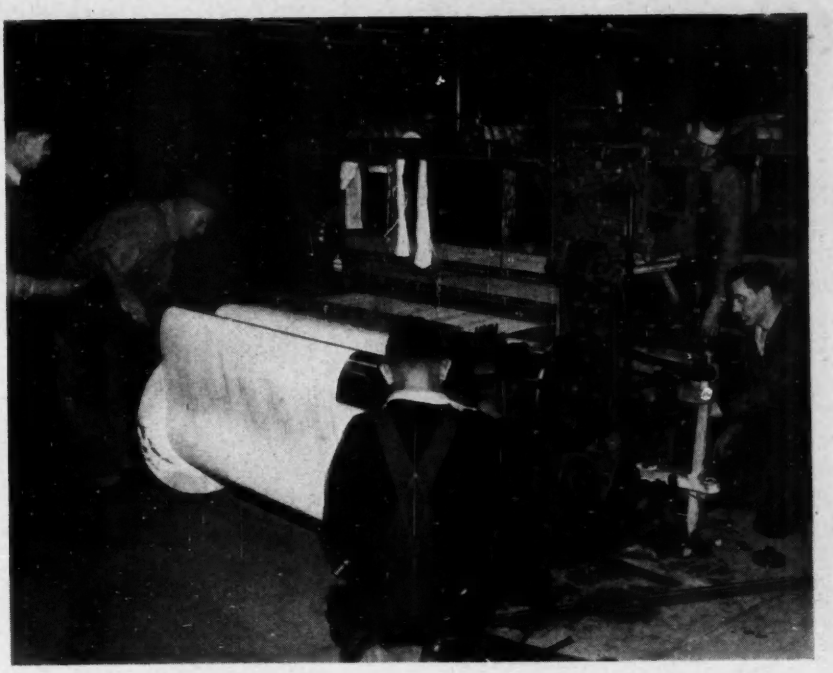
For further details, ask for Bulletin A-288.

the various parts of the looms. It was found that the learners could do a better job in classes outside of the plant; therefore the classes for learners are not conducted inside the mill.

An instance was related wherein the best fixers were selected and placed with the loom erectors who were installing new looms. The fixers went with regular vocational classes to look at installations covered.

Nine mills conducted a training program for fixers whereby they were placed with the manufacturer's representatives or erectors to learn.

Air Conditioning in Weave Room. Seven mills reported experience with air changing facilities in the weave room. Four of these were using evaporative cooling systems. Some of the advan-



Training loom fixers with good results is being done by allowing the fixers to work with the loom erectors when installing new looms. The discussion method of teaching is not favored by most mills. Practice on assembling and disassembling the loom is said to produce better fixers.

Precautions to Prevent Damage to Cloth When Weaving Maximum Width in the Loom

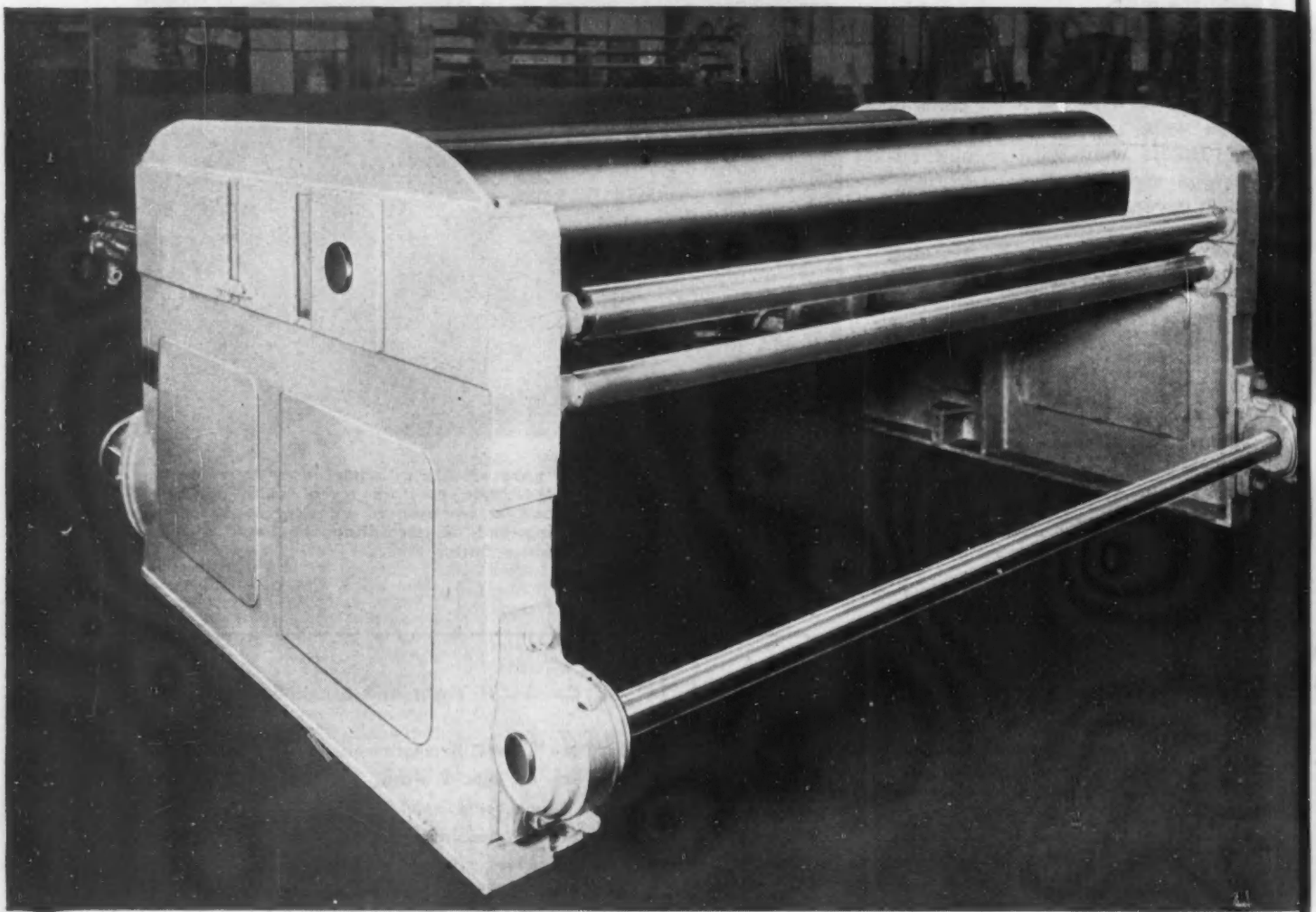
1. Be sure cloth comes off sand rolls as evenly as possible between traverse stands.
2. Be sure there are no bolt heads or obstructions protruding from traverse stands.
3. Have loom leveled and aligned from warp to cloth roll.
4. Keep cloth traverses clean.
5. Be sure cloth roll tubes are long enough to prevent them from moving back and forth on the rod.
6. Use a minimum amount of oil in the area where the end of the cloth has to build.
7. Require cloth doffer to clean out all oil and grease in this area before he doffs.
8. Keep sand roll covered with good covering, especially around the ends of the roller to eliminate danger of snagged or cut cloth.
9. A wood block placed between cloth roll and cloth roll stand is sometimes helpful.
10. Be sure cloth roll has same tension on both ends against sand roll.
11. Check cloth roll bushings for wear and need for replacement.
12. Card board washers can be placed on cloth rollers to take up space between cloth and cloth stands to prevent side movement.
13. Warp should be equally divided in the reed.
14. In some instances it is helpful to place a pipe over the cloth rod.
15. Use waste to cover parts around edges where cloth may touch.

Causes of Tight and Slack Selvages

1. Take up roll or cloth roll out of adjustment.
2. Take up blocks worn.
3. Crooked beam head.
4. Sand roll too high on one end.
5. Insufficient grip on sand roll.
6. Warp reeded in too much or poor designing.
7. High and low places in beam next to beam heads.
8. Tape selvage motion improperly set.
9. Harness not level.
10. Whip roll not level.
11. One end of cloth traverse tighter than other.
12. Worn or crooked loom beam journals.
13. Eccentric pins not aligned.
14. Temple rolls not operating properly.
15. Double spring wind-up.
16. Lack of lubrication or dirt in gears.
17. Poor slashing. (Excessive size on selvage ends.)
18. Mixed plied and single end selvage.
19. Rolled or twisted ends.
20. Spring shaft on cloth traverse bent.
21. Cloth traverse rack block worn.
22. Uneven take up roll covering.
23. Drag rolls or drop wire box out of line.
24. Uneven tension on cloth roller stands.
25. Cam followers not square, thereby stretched ends cause kinks.

Where would you use this machine?

☐ WATER MANGLE ☐ EXTRACTOR ☐ CAUSTIC PADDER



Right—no matter what your answer! The amazingly flexible Butterworth 3-roll Horizontal Padder can be used as a water mangle in front of dry cans, as an extracting mangle, or as a caustic padder in a mercerizing range. It calls for only a minor change in boxes. Or with a change of rolls, the machine becomes a 15-ton rayon calender. Rolls of any diameter can be used without new parts or major revisions.

Check these advantages:

(1) Even, adjustable pressure
(2) Positive pull
(3) No accumulation of cloth at the nips because drive is to exit roll
(4) Bearings are in fixed guides
(5) All controls within easy reach of operator
(6) Easy to maintain
(7) Streamlined in appearance
(8) Available with covers to prevent splashing and leaking of liquid.

The Butterworth 3-Roll Horizontal Padder may be the machine you are looking for—to speed up production, reduce seconds, increase profits. Let us give you full details.

BUTTERWORTH

H. W. BUTTERWORTH & SONS COMPANY, Philadelphia 25, Pa.

PROVIDENCE DIVISION, Providence, R. I. - 1211 Johnston Bldg., Charlotte, N. C. - W. J. Westaway Co., Hamilton, Ont. - ARGENTINA: Storer & Cia., Buenos Aires - AUSTRALIA: Noel P. Hunt & Co., Ltd., Melbourne - BELGIAN CONGO: Paul Pflieger & Co. - BOLIVIA: Schneiter & Cia., Ltda., La Paz - BRAZIL: Cia. Industria e Commercia, Sao Paulo e Rio de Janeiro - CHILE: Schneiter & Cia., Ltda., Santiago - COLOMBIA: C. E. Halaby & Co., Medellin - CUBA: Thos. F. Turrull, Havana - ECUADOR: Richard O. Custer, S. A., Quito FRANCE: Georges Campin, Le Perreux, Seine; Rene Campin, Sceaux, Seine - MEXICO: Slobotzky, S. A., Mexico, D. F. - MIDDLE EAST, MEDITERRANEAN, BALKANS, AUSTRIA, HUNGARY, CZECHOSLOVAKIA, INDIA: Arlind Corporation - NORWAY: Dr. Ing. Otto Falkenberg, Oslo - PERU: Custer & Thommen, Lima - SOUTH AFRICA: Texmaco, Johannesburg - SWEDEN: Elof Hansson Goteborg URUGUAY: Storer & Cia., Ltda., Montevideo - VENEZUELA: Herbert Zander & Co., Caracas.

tages claimed are as follows:

1. Controlled temperature year around.
2. Better working conditions.
3. Controlled humidity more uniform.
4. Improved weaver morale.
5. Better production.
6. More cleanliness.

In using air changing systems, the practice in some cases was to raise every third window on one side of the room to maintain an even flow of air. The air was usually blown out the other side of the room. This was said to eliminate dry and wet spots. Some mills start humidifying two hours before Monday morning start up.

Weave Room Humidity over Week-end. Only one mill reported controlling humidity in the weave room over the week-end. The advantage in this practice was to prevent warps from drying out; however, there is danger of mildew unless the humidity is closely controlled.

Height for Humidifier Outlets and Controls in Weave Room

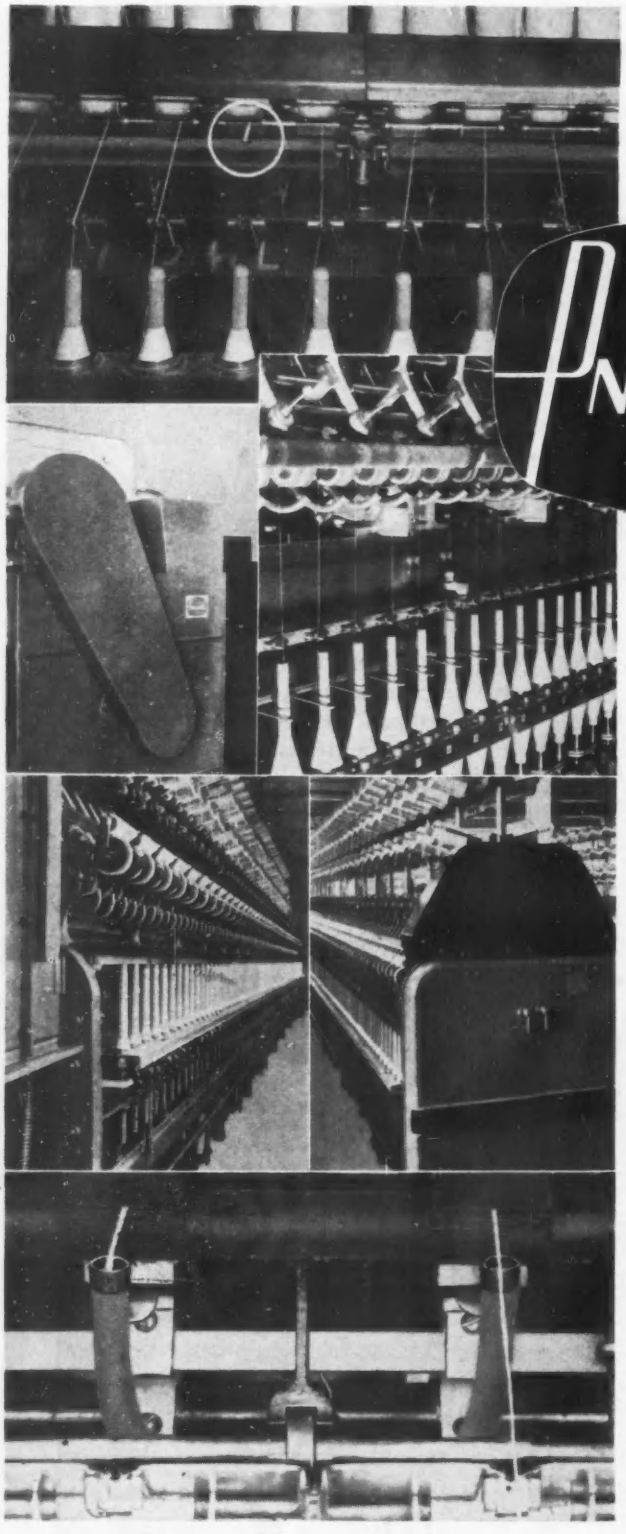
Mill No.	Height of Humidifier	Height of Controls	Height of Ceiling
A	8 ft.	5 ft.	16 ft.
C	9 ft.	6 ft.	16 ft.
I	8½ ft.	.....	16 ft.
K	9 ft.	.....	16 ft.
L	8 ft.	6 ft.	16 ft.
M	10 ft.	6 ft.	14 ft.
N	10 ft.	6½ ft.	16 ft.
S	7 ft.	6 ft.	14½ ft.

Stripping Quills. Eleven out of eighteen mills considered stripping quills by machine to be the most economical way of doing the job. These mills stripped yarn numbers from 4s to 51s and had from zero to .03 per cent quill breakage in machine stripping. Two mills were getting close to one per cent quill breakage on their strippers.

In some mills it was found more economical to strip coarse counts of yarn by hand, and in one instance a report indicated a cost break-even point at 6s yarn. It was explained that 6s yarn could be stripped by hand or machine at approximately the same cost; whereas coarser counts were cheaper to strip by hand, and finer counts were more economically stripped by machine.

NUMBER OF LOOM STOPS HANDLED BY WEAVER

Mill No.	Stops per Hour	Stops Per Loom hr.	Warp Stops %	Filling Stops %	Mechanical Stops %	Cloth Construction	Type Loom	Loom Speed (ppm)
A	45	.....	33	42	25	.....	X2	192
B	37.5	.....	38	33	14	.....	.....	.....
E	.....	1¼-1½	61	28	11	96 x 64	.....	154
F	50	.....	55	40	5	.....	40" } 100" }	188 112
G	.....	.5	40	40	20	56 x 56	X	180
H	.....	1.08	48.6	39.8	11.6	86 x 64	32" E	160
I	.61 stops/m picks		28	70	2	29 x 18	40" E	.....
J	.340 stops/m picks		79	12	9	42 x 60	C3	164
K	55-60	.....	89	6	5	48 x 44	46" X	180
L	35	.....	50.35	6.6	43.05	drills	40" E	.....
M	40	.....	50	40	10	108 x 58	44" X2	182
N	42	.....	9.9	44.5	9.5	23 x 23	60" D	135
O	35	.....	52	43	5	84 x 28	D	150
Q	.....	1.85	64.3	25.9	9.8	.....	.....	182
R	58	.....	74.0	.....	26.0	28 x 24	36" D	172
S	20	1.00	55.0	20.0	25.0	67 x 46	39"	.....



PNEUMAFIL★

Wool

Cotton

Rayon

Worsted

Asbestos

Blends

Flax

Jute

Tow

Pneumafil eliminates many of the problems heretofore accepted as inherent to spinning these materials.

Operating as a vacuum system, Pneumafil collects free lint and foreign matter from the yarn as it leaves the front rolls. When breakage occurs, the broken end is picked up and pneumatically conveyed to the collector. Here the waste is retained, open and loose, ready for reuse without waste machine processing.

Spinners are relieved of ends down troubles. There are fewer ends down and less time required to put an end up. Scavenger rolls are eliminated. Spinning room waste and cleaning are reduced. Housekeeping is benefited. Frame stoppages are reduced. "Wild" or "flying" ends and resultant doublings are eliminated. Waste is salvaged without reduction in original quality. Frequently, it is practicable to operate at higher spinning speeds with Pneumafil.

Whether purchasing new spinning or improving old, investigate the increased production, improved yarn quality and lower cost possibilities offered by Pneumafil.

★ Registered Trademark

South America and Continental Europe:
Luwa, S. A., Zurich, Switzerland

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P. O. Box 54, London, Canada

Mexico:
Tecnotex, S. A.
Monterrey 101, Mexico, D. F.

Pneumafil Corporation • Charlotte • Boston

Cleaning in Weave Room. Among the mills represented, the most generally-used method of cleaning in the weave room is with compressed air which is used to blow lint and fly from the walls, ceilings, and off the looms. In some instances protective coverings or curtains made from burlap or other material are used to separate looms or to cover them in preventing waste from falling on the looms and spoiling the cloth being woven. A few mills use a brush, mop, or broom to assist in overhead cleaning. The interval of cleaning varied from once daily to one time each four weeks.

Looms are most often cleaned by blowing off when the warp runs out. Six mills reported using some form of mineral spirits in cleaning the looms. This was usually sprayed on or applied with a brush and then blown off. The mineral solution is used on the loom sides and other parts which do not come in contact with the yarn or cloth.

Cleaning operations on looms with warps running were confined to blowing off with compressed air and brushing. The frequency of this type of cleaning varied from one time in four hours to one time in 24 hours.

No significant figures were obtained on the time required to run a warp off because of the difference in cloth construction, counts of yarn, and other variables; however, the reported figures showed that warps ran anywhere from 48 hours to six weeks.

The most common method of cleaning heddles, reeds, drop wires, and similar parts of the loom was with compressed air. In a few instances brushes are used in this operation, and three mills use some form of rust preventive on the reeds after cleaning.

Humidity in Jacquard Weave Room. Those mills producing Jacquard fabrics indicated that the use of humidifiers in the Jacquard weave room helped the yarn but adversely affected the heads and lingo cords.

In one mill, the humidity caused the needle boards to swell, thereby necessitating their removal for alterations. Moisture also caused the needles and springs to stick. The solution for these troubles was to clean the Jacquard mechanism more often.

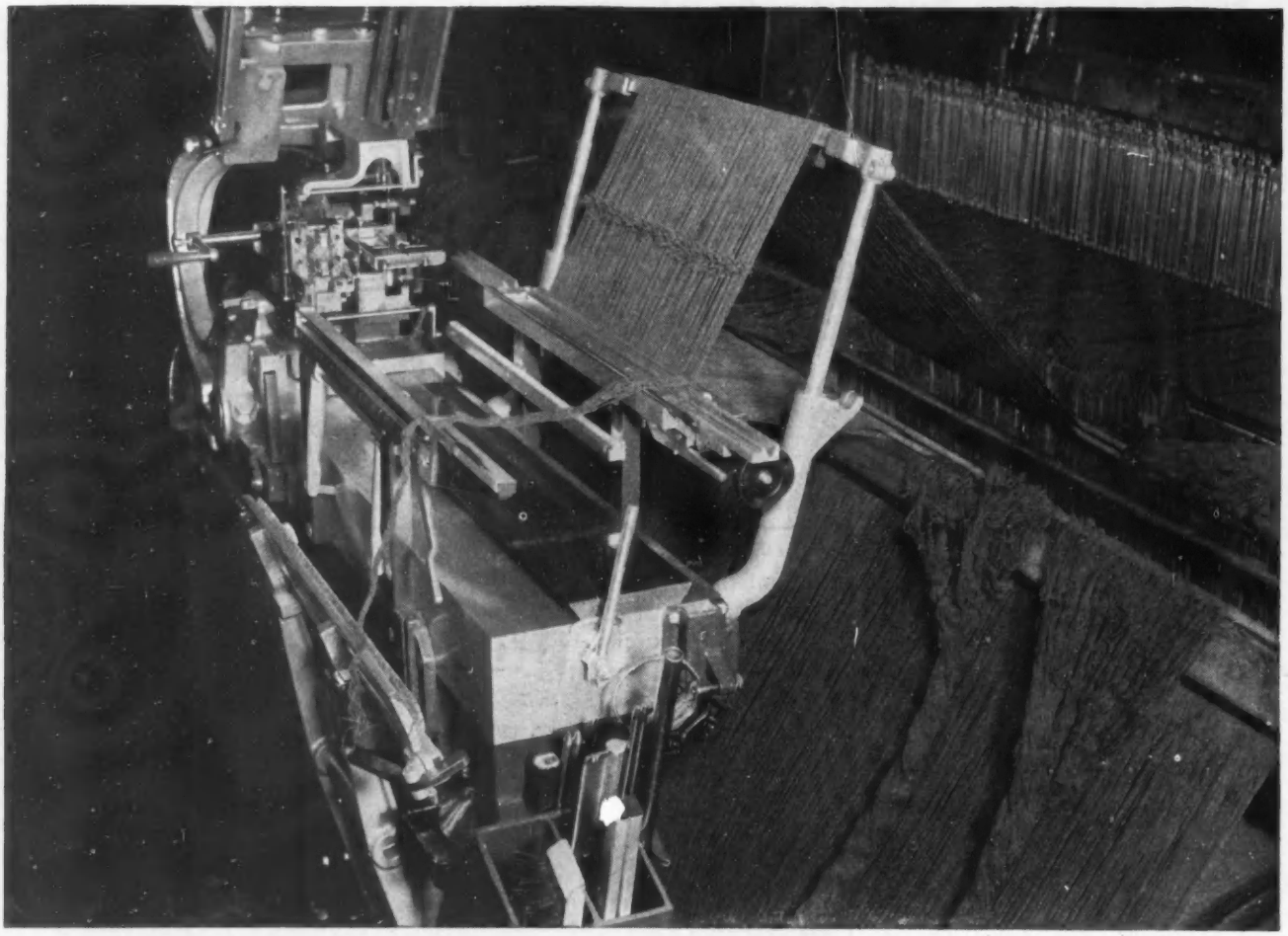
A spokesman on this subject stated that an experiment was tried using 12 atomizer heads delivering 12 pounds of water per head per hour over the back alley. One check on 10 looms after two weeks showed that loom efficiency had increased one per cent. This man stated that a fair check could not be made in an open weave room with a few atomizers.

The characteristic trouble with lingo cords untwisting during cool damp weather was experienced by all of the mills operating Jacquard looms. The remedies suggested for this trouble were as follows:

1. Adjust head to compensate for cords untwisting.
2. Use braided cord to help relieve the trouble.
3. Maintain constant temperature and humidity.
4. Use collet wire to aid in relieving the condition.
5. Use steel lingos.

EVERY JOB IS IMPORTANT

And that is the idea the able editor of "Textiles Review" gets across in the employee publication of Textiles, Inc., Gastonia, N. C. "To operate a successful plant, it is important that every job should be performed in the best possible way," goes the caption under the picture of Lackey Ruff—expert sweeper, and "that certainly applies to keeping the inside of a plant and its machinery clean and free from lint, dirt, and trash, which would otherwise cut down the efficiency of the machines. A sweeper has an important job to do."



BARBER-COLMAN

PORTABLE WARP TYING MACHINE

MODEL LS

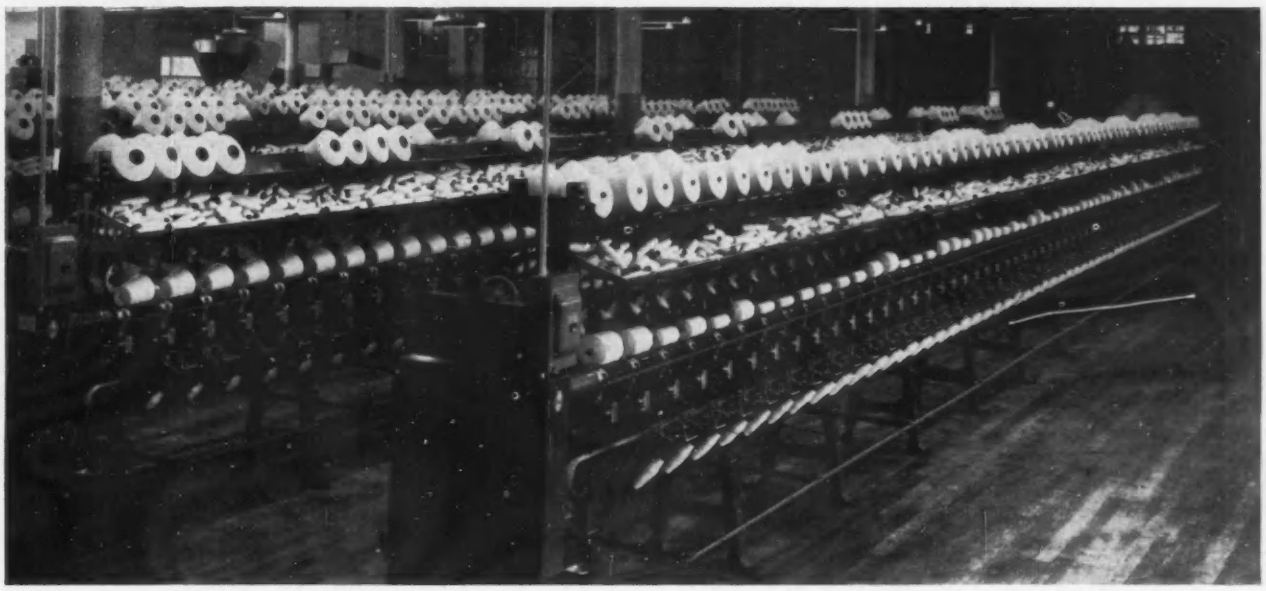
The above view shows the portable Warp Tying Machine in operation of tying-in a new wool warp at the loom. The ends on the left have been tied. The reed, harness and drop wires are left undisturbed, saving the labor and time required for removing and replacing the weaving elements, as well as re-gaiting of the loom. This machine is particularly adapted for tying-in wool, worsted, mohair and other difficult yarns. The Figure-8 knots securely hold all types of yarn. All warps are selected from an end and end lease resulting in perfectly straight warps.

AUTOMATIC SPOOLERS—SUPER-SPEED WARPERS—WARP TYING MACHINES—DRAWING-IN MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND



Courtesy, West Boylston Mfg. Co. of Alabama

Installation of Roto-Coners, drum winders with rotary traverse. Machine on right is winding parallel paper tubes, others paper cones.

WINDING MACHINES——

Principles and Practices

Article 16: Drum Winding

By JESSE W. STRIBLING
Universal Winding Co.

THIS ARTICLE begins the discussion of drum winders, a different type of machine from precision winders, as dealt with in the first fifteen articles previously published. Covered herein are the two methods of traversing the yarn, what is meant by "angle of wind," the cause for ribbon formations, and methods of preventing ribbons on drum winders.

IN THE FIRST article of this series it was stated that, generally speaking, winding machines may be divided into two categories: *precision winders* and *drum winders.*

All the preceding articles have dealt with precision winding and the No. 50 machine as being typical of that type. Beginning with this article will be discussed drum winders, and as typical of that type, the No. 44 Roto-Coner will be covered.

As was stated previously, a drum winder gets its name from the fact that the package is driven by frictional contact between the surface of the package and a driving drum. On this type of machine, the yarn speed remains practically constant.

There are two different methods of traversing the yarn on drum winders:

1. By means of a reciprocating guide, as shown in Fig. 95, whereby the drum is used only to drive the package, and a separate reciprocating thread guide, driven by a cam, is used to lay the yarn on the surface of the package.

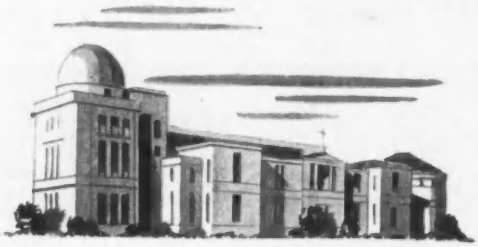
2. By means of a rotary traverse, as illustrated in Fig. 96, whereby the drum drives the package, and the intersecting helical groove, an integral part of the drum, guides the yarn. This is the method employed in the Universal Roto-Coner.

Angle of Wind. In discussing precision winding, the number of winds was defined as the number of wraps of yarn around the pack-

FOR

DEPENDABLE TIME

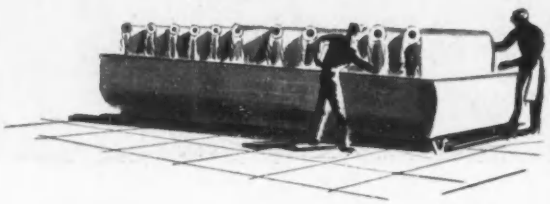
... the Naval Observatory at Washington is the *accepted standard* of the nation.



FOR

DEPENDABLE LUBRICITY

... NOPCO 1111 is the *accepted standard* of the Rayon Industry.



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For full information write for "Important Points Regarding Rayon Warp Sizing," "NOPCO 1111—Soaking Oil for Rayon Crepe Yarns."

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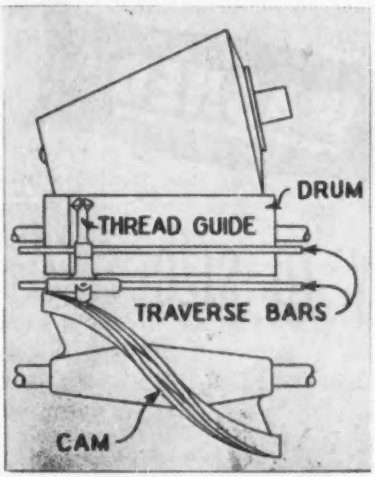


Fig. 95. Drum winder, illustrating the type with reciprocating thread guide.

age to *one stroke* of the thread guide. The same definition applies to drum winding, but it should be emphasized that the number of winds is constantly changing on a drum winder, as the package increases in diameter. (Since the package is surface driven, the revolutions per minute of the package are steadily decreasing, so that the ratio of the speed of the package—in revolutions—to the speed of the thread guide, or other traversing mechanism, is constantly changing.)

Because the number of winds is not constant throughout the building of a package in drum winding, as it is in precision winding, the term "angle of wind" is sometimes used when referring to drum winding. By angle of wind is meant the angle between the thread of yarn on the surface of the package and a line drawn at right angles to the axis of the package, as shown in Figs. 97 and 98. It will be seen from Fig. 97 that, in drum winding, the angle of wind *does not* change from inside to outside of the package. In precision winding, the angle of wind *does* change, as shown in Fig. 98, but the number of winds remains the same throughout the package.

Ribbons. As has been stated previously, when the number of winds is exactly a whole number (such as 2, 3, or 4) or a half-number (such as 1½, 2½, or 3½), each succeeding wrap of yarn will be laid exactly on top of the preceding wrap, forming what is called a "ribbon." This ribbon formation will continue as long as the number of winds remains at exactly a whole or half-number (until the package diameter has increased enough to change the number of winds) unless means are provided to prevent any succeeding wrap from being laid exactly on top of a preceding wrap.

A wound package is not acceptable for succeeding processes if it contains large ribbons, as described above, particularly if the yarn is to be drawn off over the end of the package. When the yarn piles into a ribbon, a "knuckle" is usually formed at each end of the package and will protrude beyond the ends of the package. When the yarn is drawn off, in the following process, it will catch on this knuckle at the rear end of the package and will frequently break. This ribbon formation is not so serious where the yarn is drawn from the package by unrolling it in the following process, because the unrolling package will usually deliver without breakage.

Method of Breaking Ribbons. To prevent the formation of ribbons on a drum wound package, some means of preventing the yarn from piling, at those diameters in the package where ribbons are formed, must be provided.

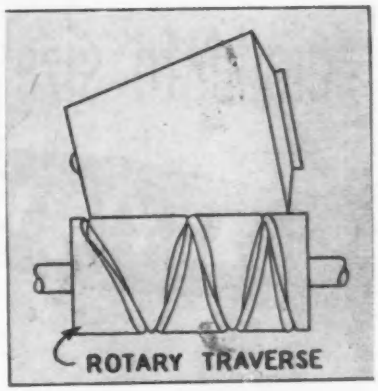
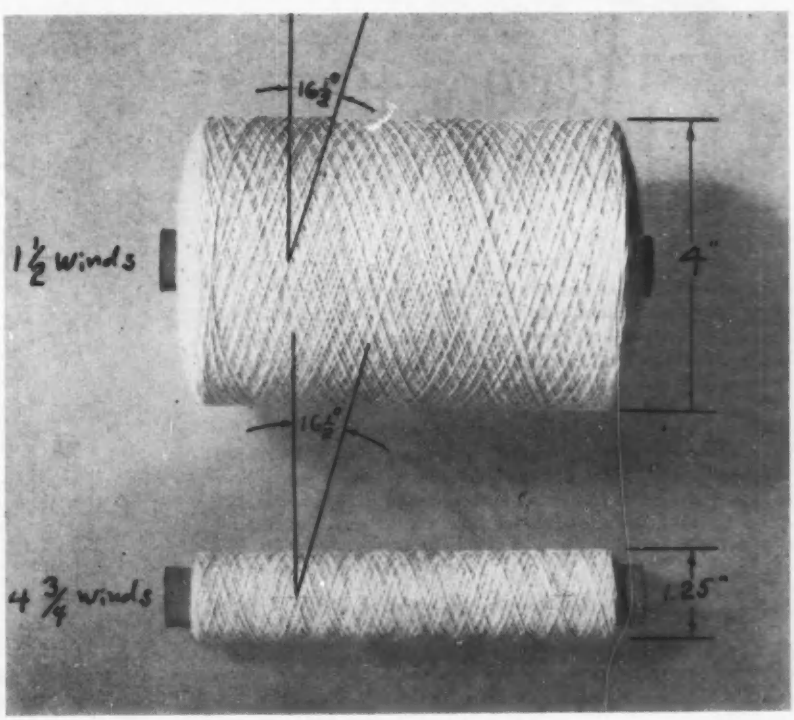


Fig. 96. Drum winder with rotary traverse method of guiding the yarn.

If the drum winder is of the type as shown in Fig. 95, where the drum is used only to drive the package and a separate reciprocating thread guide is used to traverse the yarn, ribbons are prevented by constantly varying either the speed of the driving drum or the cam which actuates the thread guide. The mechanism for varying the speed is usually referred to as the "ribbon breaker," and it is usually applied to the cam shaft rather than the drum shaft.

Fig. 97. The angle of wind does not change on a drum winder.



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On early models of drum winders, the speed of the driving drum was varied by means of cone pulleys, with a belt traversing back and forth between their ends. However, on practically all reciprocating-guide drum winders being manufactured today, the ribbon breaker varies the speed of the cam shaft, either by using a V-belt drive with variable pitch sheave or by the use of a compound gear mechanism, including a crank arm, which accomplishes the same purpose.

With either mechanism, the speed of the cam shaft is constantly varied, up and down, and this prevents any one wrap of yarn from being laid exactly on top of a preceding wrap, regardless of the diameter of the package. In other words, when the package reaches a diameter where a ribbon will usually form, as covered in the foregoing, the varying speed of the thread guide will prevent a ribbon formation. Of course, there is the possibility that, at some given diameter of the package, the speed of the traversing mechanism may happen to be exactly right to lay one wrap of yarn on top of the preceding wrap, but since the speed of the traversing mechanism is constantly changing, this can occur for only an instant, and there will not be enough piling to cause the formation of a ribbon.

On a drum winder with a rotary traverse, as illustrated in Fig. 96 and as used on the Roto-Coner, the yarn is guided onto the package by an intersecting helical groove which is an integral part of the driving drum. Since this groove is incorporated in the drum, it is obvious that the method of breaking ribbons as used on a reciprocating-guide machine cannot be used. On the Roto-Coner, which employs the rotary traverse, another method, known as the "skid" principle, is used. The driving drums on one side of a Roto-Coner are mounted on a shaft, running in ball bearings, and the shaft is driven at one end by V-belts from a motor underneath (A in Fig. 99). Each shaft, one on each side of the machine, is driven by its own motor.

The ribbon breaking mechanism consists of a switch in the power line leading to both driving motors; by a suitable cam mechanism in the switch, the power to the motors is interrupted for an instant about thirty-five times per minute, depending upon the speed of the drum shaft.

When the ribbon breaker switch opens the power circuit for an instant, the drum shaft begins to slow down, and then, when the switch closes the circuit, the motors quickly pull the drum shafts back to normal operating speed, and this sudden increase in speed causes the packages to slip, or skid, on the driving drums. This skidding action is very slight, but it is sufficient to change the lay of yarn on the package and prevent one wrap from winding on top of the preceding wrap.

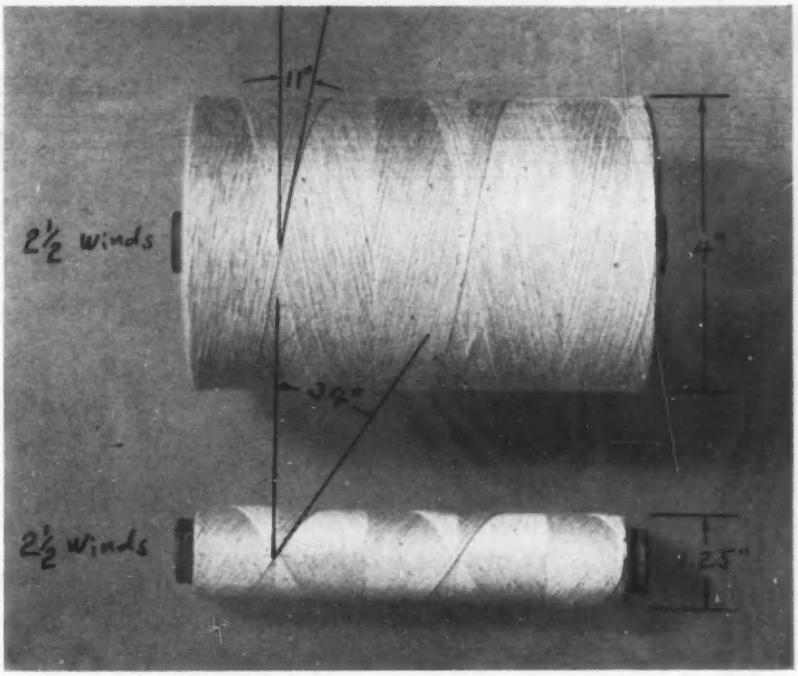
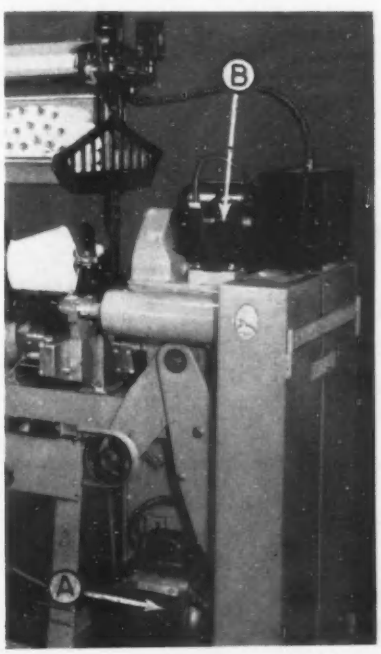


Fig. 98. Precision winder packages. The angle of wind changes but the number of winds remains the same throughout the package.

Fig. 99. Drive end of Roto-Coner.



The cam in the ribbon breaker switch is mounted on a short shaft which is driven by sprockets and a chain from a "pilot" motor (B in Fig. 99) mounted on the drive end of the machine. The speed of this cam is in the ratio of 1 to 60 with the drum shaft. For example, in winding knitting cones at an actual take-up speed of 500 ypm, the speed of the drum shaft will be about 2100 rpm, which would call for a speed of 35 rpm for the switch cam, causing 35 power interruptions per minute.

Since the cam in the ribbon breaker switch is driven by the pilot motor—entirely separate from the drum shaft drive—it can be seen that, when an appreciable change is made in the winding speed (speed of the drum shaft), the sprocket on the switch cam shaft should be accordingly changed to preserve the ratio of approximately 1 to 60. Suitable

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a light yellow colored solid in flake form, soluble in water, slightly soluble in alcohol, insoluble in ether.

ANALYSIS

Sodium Sulfide	60 to 62%
Sodium Chloride	1.5% Max.
Other Sodium Salts	2.0% Max.
Iron	8ppm. Max.
All other metals	1ppm. Max.
Water of Crystallization	36.5 to 34.5%

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sprockets, with different numbers of teeth, are provided for this purpose.

The cam in the ribbon breaker switch consists of three segments on the cam shaft, as shown in Fig. 100. These three segments, fan shaped, are adjustable—to provide more or less dwell—to vary the time the power is off in the motors. The off-time is determined by the load or number of spindles per machine, the more the load the more the drum shaft speed will drop with the same setting of the segments.

For normal winding conditions, the speed of the drum shaft should not drop more than 250 rpm, at the interruption of power to the motors, below the normal full speed of the shaft. This drop in speed of the drum shaft can be determined by direct tachometer reading on the end of the drum shaft, but actually it should be only enough, as determined by winding tests, to insure breaking the ribbons, because the greater the amount of drop in drum shaft speed, the more power is consumed by the main driving motors.

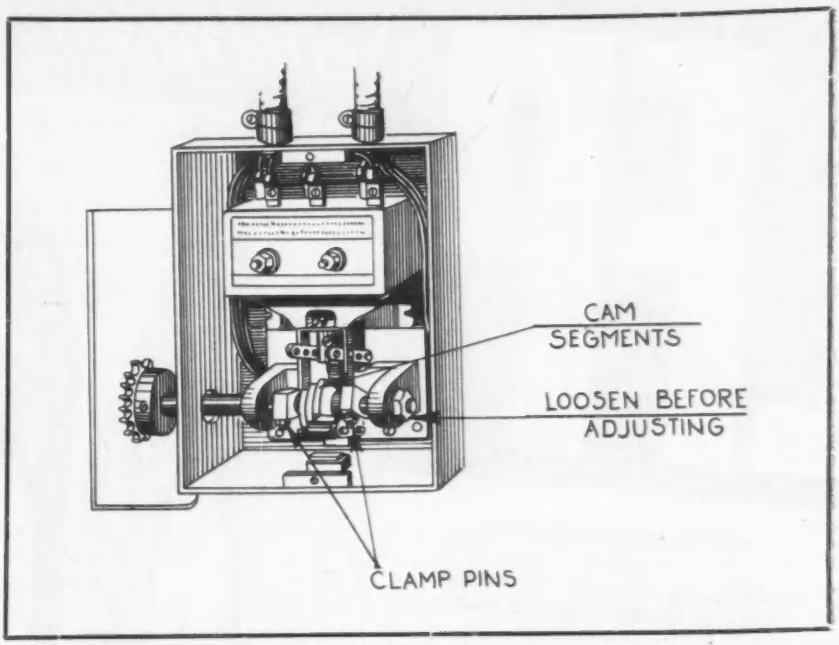

Fig. 100. Ribbon breaker switch on Roto-Coner. Be sure the power is off before making adjustments on cam segments.

It can be seen that the drop in speed is determined directly by the length of time the power is off at each interruption, and this time is regulated by opening or closing the cam segments in the ribbon breaker switch. Opening the segments keeps the power off for a longer period at each interruption, and conversely, closing the segments will reduce this period.

(Article 17, to appear in an early issue, will continue the discussion of the No. 44 Roto-Coner and will deal principally with slippage between package and driving drum.)

◆◆◆

How Often Are Workers Absent?

A survey just completed by the Social Security Administration, the United States Public Health Service, and the Bureau of Labor Statistics shows that unscheduled absences from work resulted in the loss of 9.6 days of working time for each worker in manufacturing industries during 1947.

This survey was analyzed by *Management Information*, and showed that on the average, each worker was absent 3.4 times during the year. Three-fifths of the absences (60.9%) and over two-thirds of the lost time were for illness or accidents not related to employment. 37% of the absences were for personal reasons. Less than 2% of the absences resulted from accidents at work or from industrial sickness, or an average of less than 6% of the total time lost.

Men average 9 days a year away from work and women 12.7 days. Women were sick more often than men, but absences for personal reasons were higher among men.

It was estimated that, generally, the average worker was absent because of illness on two occasions during the year, and took time off for personal reasons at least once a year. There was more absence because of illness in the winter, and more for personal reasons in the better weather—particularly among men.

Supervisors would find it profitable to compare this survey with their own departmental records. If they average more time lost through industrial accidents or illness, it would be well to check safety practices carefully, says *Management Information*. If workers are out a high percentage of the time for personal reasons, it may be that the morale of the department is not up to par.

Department of Agriculture Classes 165,000 Bales of Cotton Weekly

A heavy backlog of cotton classing work resulting from numerous farmer requests for government cotton loans has been removed, and U. S. Dept. of Agriculture classing offices in the Southeast are now classing 165,000 bales weekly.

Cotton offered for full government loan must first receive official classification. The large cotton crop this year and decline of cotton prices to near average loan rate of 30.74 cents a pound for 15/16-inch Middling cotton were factors that caused many producers to seek government loans, according to the Production and Marketing Administration of U. S. D. A.

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What It Accomplishes—

Permits increasing bobbin capacity with practically the same size shuttle fitted to your present lay-end boxes.

Advantages—

Eliminates costly replacement of lay-ends or new lays—No lengthy changeover time—No shifting of looms—No greater floor space required—No leasing out and rewarping—No loss of production.
Can be applied to any loom using yarn counts applicable to longer bobbins.
All the "down the line" savings effected by using fewer bobbins in spinning and weaving.

How This Is Accomplished—

By a shorter eye with same features as long eye—Compact high speed tip construction—Structural design of shuttle strengthened—Minimum increase in shuttle length.

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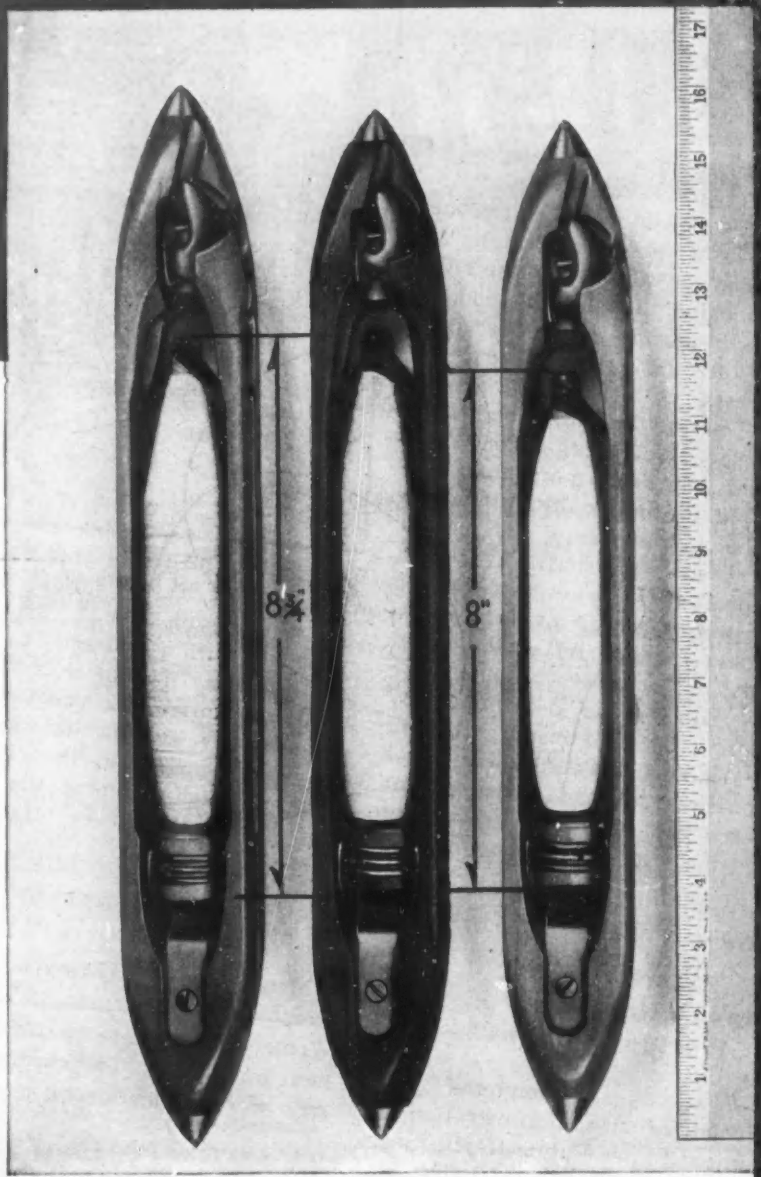
Have our Shuttle service men give you complete details.

Compare the L.F.P. way with all these advantages to the costly and lengthy changeover method.



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Cotton Warp Sizing

Article 20

By PAUL V. SEYDEL, D.Sc.

THIS SERIES of articles has been running since August 1946, approximately two and one-half years. Therefore the author deems it appropriate at this time to stop once more and survey the field of cotton warp sizing to review developments in the meantime. It is felt that the value of these articles will be increased by keeping them reasonably complete.

THERE are many new developments coming into the sizing field, some of which will undoubtedly be of great value. Yet, although we do not wish to emulate those human ostriches which scoffed at Eli Whitney and Robert Fulton, we should be careful about overemphasizing the value of anything new simply because it is new. Too often a new process, product or piece of equipment which promises to revolutionize our methods turns out to be loaded with gimmicks and drawbacks that make it more trouble or expense than the return is worth.

We remember, for example, the squirrel-cage type of immersion roll which a few years back was to give such remarkable improvements in slashing. We see them only rarely today.

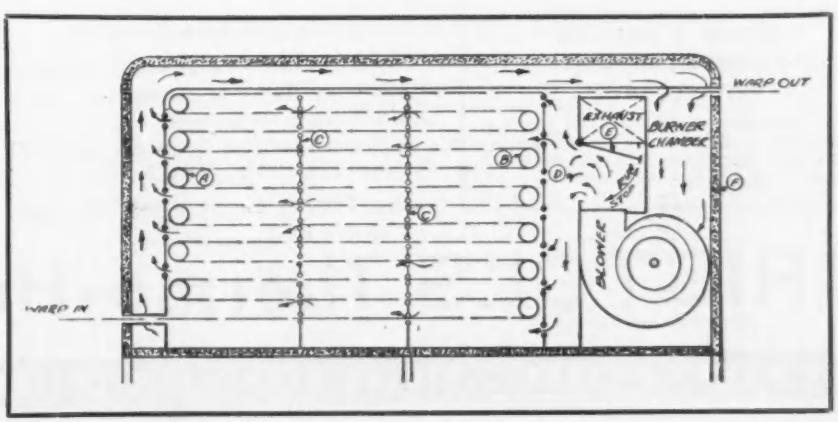
And there was that "new" type of size which recently flashed like a meteor across the slasher man's horizon . . . and disappeared as quickly. Using only 1% on the weight of the starch, it was to be subject of a patent which would save mill men thousands of dollars, giving them better weaving as well. But it, too, had gimmicks: its high alkalinity was rough on wool slasher blankets, and dangerous to human skin. Besides, even with well-trained technical help, its action on starch was difficult to control, and with the usual size cooking operations, it was practically impossible to produce uniform results. (Then our chemists found that it was practically the same material used by the French and the Germans in 1890, and long since discarded because of the discovery of new and better materials!)

On the other hand, we have the slasher moisture controls, which are not very old and are doing a good job . . . a thing is not necessarily good or bad simply because it is new. We should merely approach with caution.

Hot Air Slashers. We have previously described one model. Two more have recently found their way into the market, using somewhat different design. (A number of different designs are used on wool, but only rarely seen with cotton.)

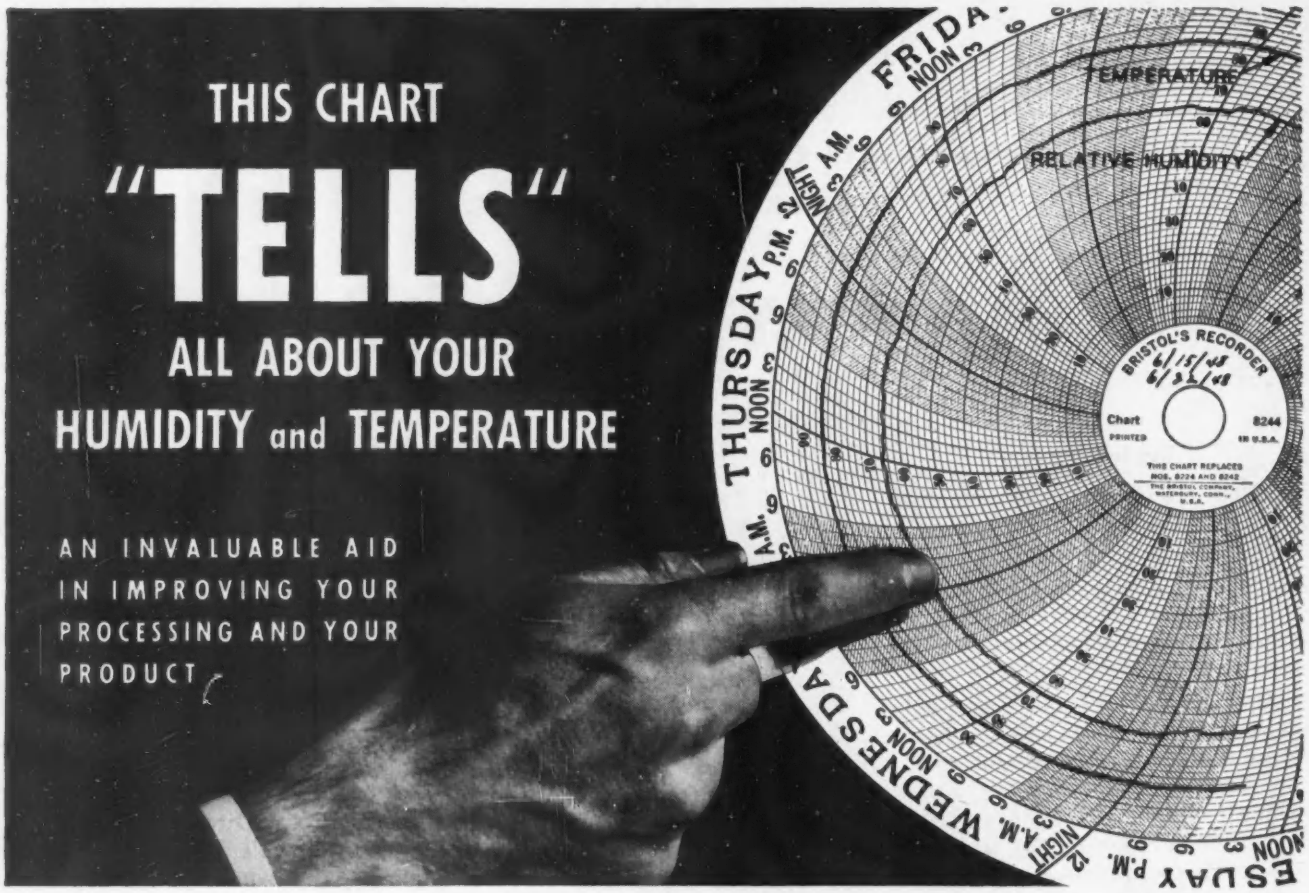
One is the Industrial Heat Engineering Co.'s "Direct Fired Warp Dryer." With this model, the warp makes 13 horizontal passes inside the drying chamber. At intervals baffles are placed to increase the push of drying gases through the warp sheet. Due to the fact that the drying chamber is direct fired, and the combustion gases are used for drying, there is no heat loss in transferring of heat from one medium to another. Another advantage claimed is that these gases contain only a very small amount of oxygen, and will therefore have very much less tendency to damage sensitive yarns. While this is

Schematic diagram of the "Direct Fired Warp Dryer." A, fluted rolls driven; B, fluted rolls idle; C, baffles; D, splitters; E, automatic cut-off damper; F, insulated housing.

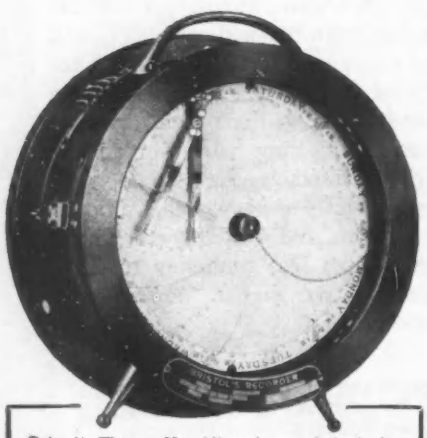


THIS CHART "TELLS" ALL ABOUT YOUR HUMIDITY and TEMPERATURE

AN INVALUABLE AID IN IMPROVING YOUR PROCESSING AND YOUR PRODUCT



According to the engineer of the full-fashioned silk hosiery mill who sent us this chart, Bristol's Thermo-Humidigraph helps "maintain an even temperature and humidity, thereby saving money by cutting down waste and giving a more uniform product".



Bristol's Thermo-Humidigraph records both the relative humidity and temperature of the surrounding air.

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Bristol's Thermo-Humidigraph is *direct reading*. Just a glance at the round chart, and you at once know the humidity and the temperature. No need for referring to humidity tables. No computations. No wet bulb — no fussing. This Thermo-Humidigraph is as easy to read as your watch. Measurement is by means of a new, improved hygroscopic recording element.

The following comments are typical:

WOOLEN MILL: "Thermo-Humidigraph gives us a check on the machines used for correcting the humidity . . . the value of constant humidity is that we can keep a better check on the weight of the yarn."

ROPE MANUFACTURER: "We feel Thermo-Humidigraph provides the most economical method of providing a record of the relative humidity in our manufacturing."

HAT MANUFACTURER: "The elimination of doubt as to causes of trouble has enabled us to maintain uniform conditions and has reduced losses owing to lack of, or surplus of, moisture."

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COTTON: Carding, combing, roving, spinning, weaving.

RAYON: Spinning, twisting.

SILK: Dressing, spinning, throwing, weaving, knitting.

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THE HANDY PORTABLE DIRECT-READING RELATIVE HUMIDITY RECORDER

true, still under normal conditions the damage suffered by oxidation on decreasing the moisture content from 50% to 7% is very small.

Fluted stainless rolls which guide the passage of the yarns give much less contact than an ordinary roll . . . less chance of size build-up on the roll, and less contact of hot metal with the yarns.

A damper operates to cut down the gas flow when the slasher is run on slow speed, and cut off the heat when the dryer box is opened, to permit immediate access to the warp, as well as to prevent overdrying.

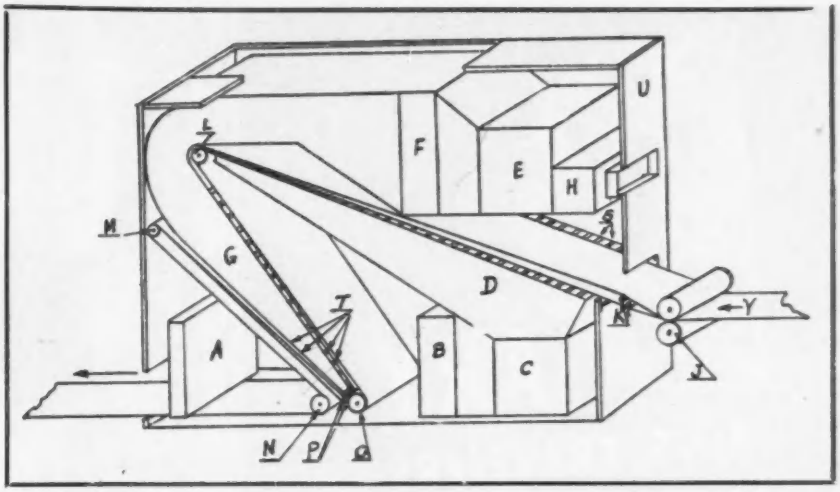
An evaporating capacity of up to 600 lbs. of water per hour is claimed, which will give under normal conditions a production of in the neighborhood of 600 lbs. of sized yarn.

The Uxbridge "Gentle Air" slasher has a more complex system of heaters and blowers which circulate hot air, discarding some and drawing in new air continually. Only four contact rolls are inside the drying box, with the first so placed that a maximum amount of travel and drying is obtained before the yarn touches the roll. This is done to dry the yarn past the "tacky" stage before contact is made.

Wet splitting of the warp sheet is also utilized to minimize damage to the dried size film.

With most hot air dryers, a very important point is control of air to give maximum flow with a minimum of strong irregular drafts, since these will cause rolling of the yarns and resultant broken ends. The Uxbridge slasher has solved this to the extent that with only 14 yards of warp in the dryer, a capacity of 1,000 pounds per hour is obtained.

Both of these slashers have the usual advantages of hot air slashers. The yarn is dried from all sides, and thus dried evenly, without an "ironing action," so that with the same size film, a yarn with less stiffness is obtained. (It is claimed by some exponents of hot air slashing that can drying produces "flat" yarns. No cases of this have ever been observed in studies in our laboratories with cross-sections examined under the microscope. Cotton is too strong and flexible to be flattened to any extent without a lot of pressure. On the other hand, contact drying probably does overheat one side of the yarn.)



The Gentle Air Model A slasher. A, preheater coil; B, heater coil; C, first pass fan; D, first pass duct; E, second pass fan; F, second pass heater; G, second pass duct; H, exhaust fan; J, size box rolls; K, wet split rolls; L, first roll; M, third roll; N, fourth roll; O, second roll; P, inside split rolls; S, first pass nozzles; T, second pass nozzles; U, insulating panel; Y, yarn sheet.

One of the greatest advantages of hot-air dryers is that the heat can be turned off on stopping the slasher, so that there is no damage from overdrying or baking of the yarns.

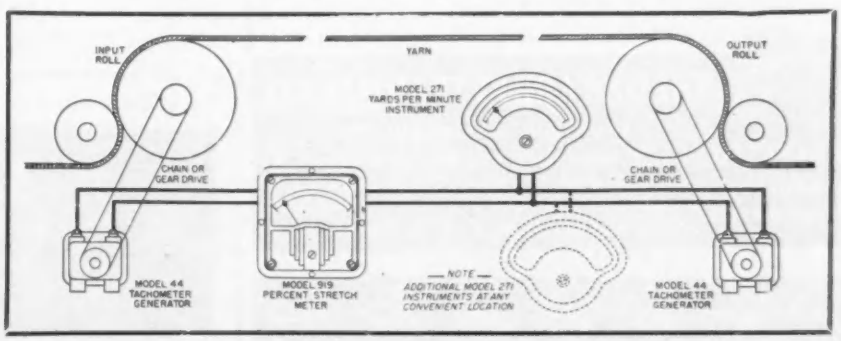
It is claimed that there is less matting of fibers with hot air slashers, since the can surfaces push exposed fibers together, and bake them in the film. Therefore, even where wet splitting is not used, splitting at the lease rods is easier. It is obvious that excessive tearing of the film at the lease rods will give a rougher yarn, defeating some of the purpose of sizing.

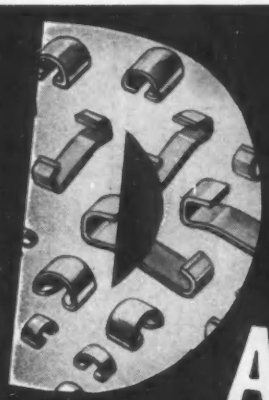
With well-insulated drying chambers, there is much less heat loss than with the conventional cylinder slasher.

A much wider range of control is obtainable with gas or air dryers than with cylinders. While the cylinder surface remains constant, the heat input can be varied only slightly by varying steam temperature or pressure. Most of the control with a cylinder slasher is obtained by varying the speed of yarn travel, while with hot air slashers, not only the speed but also the heat input may be varied over very wide ranges.

Stretch Meters. Weston has developed an instrument designated as a Speed-Ratio Tachometer which is capable of measuring both yards per minute and the amount of stretch. The yards-per-minute is measured by a small generator driven by a measuring roll placed

The Weston Speed-Ratio tachometer as applied to a slasher.





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Be certain of consistent uniformity and wearabilty at high spindle speeds—

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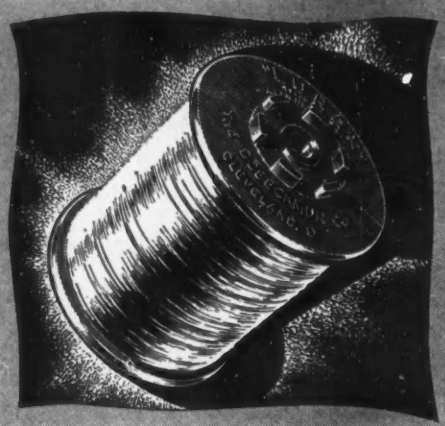
LUREX*



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These glamorous gold, silver and copper yarns can be used and sold with confidence. Lurex overcomes all of the limitations that formerly restricted the use of metal in *wide loom* fabrics.

Designers can now add to their color palettes the ageless rich tones of metal to create appealing and practical fabrics.

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The Metallic Yarn That *Never* Tarnishes
For further information write
The Dobeckmun Company, Yarn Division, Cleveland 1, Ohio.
New York Office and Show Room 250 West 57th Street.

on the slasher where it is desired to measure the speed. The voltage generated by this specially designed generator is proportional to its speed of rotation, so that a voltmeter attached may be calibrated in terms of yards per minute.

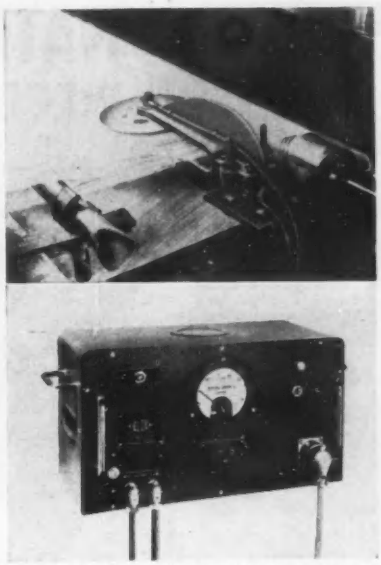
Where it is desired to measure stretch, generators are placed so that they are driven by measuring rolls both front and rear on the slasher and a Ratio-Meter measures the difference in voltage generated by the two generators. Since this difference is proportional to the difference in speed of the two measuring rolls, this meter may be calibrated to read directly in per cent stretch.

While this type is indicating and not controlling, it may be used as a basis for controlling, and manual adjustment can of course be made.

Although the stretch meter shows promise of some value when used with cotton at stretches around 1½%, it is much more useful with rayon, where stretches of around 6 or 7 per cent will give larger reading differences on the meter, and thus more accurate measurement of variations.

Anti-stick Rolls. A couple of mills have made use of a device which for want of a better name might be called an "anti-stick roll." This is a wooden or metal roll with exaggerated fluting, which takes the warp yarn sheet off the first cylinder of the slasher. The fluting gives a continual in-and-out motion to the yarn sheet, so that it has an irregular stronger pulling motion away from the cylinder surface. This is often sufficient to overcome sticking troubles where conditions are not severe.

Warp Lubricator Unit. On the theory that the fats should be on the outside of the size film rather than on the inside, the Southern Sizing Co. is marketing an applicator roll for achieving this purpose. This consists of a stainless steel roll which turns in a trough of emulsified fats. The roll is located between the size box and the first cylinder. After the warp yarns have passed through the size mix, they pass over this stainless steel roll (with only a light contact) before coming into contact with the drying cylinder.



Courtesy, Fielden Electronics Inc.

The "Drimeter" for the measurement and control of moisture. Upper photo shows the condenser installed on a slasher. Below, the hygrometer unit. A feature story regarding the operation of this instrument will appear in the February 1949 issue of "Textile Industries."

The fat emulsion wets the surface of the roll and is picked up by it and transferred to the yarns. Increased pick-up can be obtained by increasing the speed of the roll, thus allowing less time for the emulsion to drain back into the trough as the roll turns. This speed control is used to control the amount of lubricant added to the warp.

According to the manufacturer, the fat emulsion has sufficient wetting and flowing properties to enable it to completely surround the yarn, even though it is applied on one side only.

Several mills have tried modifications of this method: one by spraying a wax emulsion onto the yarn, another by using an applicator roll on the front of the slasher and applying the fats after the yarn had been dried.

According to reports from a recent meeting of the Alabama Textile Operating Executives, results are not yet conclusive. Two advantages have been brought out: with the fats on the outside of the yarn, there is less tendency to stick on cylinders (when fats are applied before drying); secondly, there is claimed to be less filling breakage. This is presumably due to lubrication of the shuttle by the fats on the outside of the warp yarns. It is probable that proper application of a good shuttle dressing will obtain the same effect.

One disadvantage reported has been the difficulty of obtaining uniform pickup. In addition, when the slasher is operated at slow speed, the roll sometimes picks up very little emulsion.

There may be advantages to be gained by having a lubricant on the outside of the yarns. On the other hand, it is felt that this will not be a substitute for softeners, deliquescents and film-forming agents within the starch film itself.

The increased cost of operation and materials make necessary a very marked improvement in production to pay for this additional operation. It is not possible at this time to predict whether this can be accomplished.

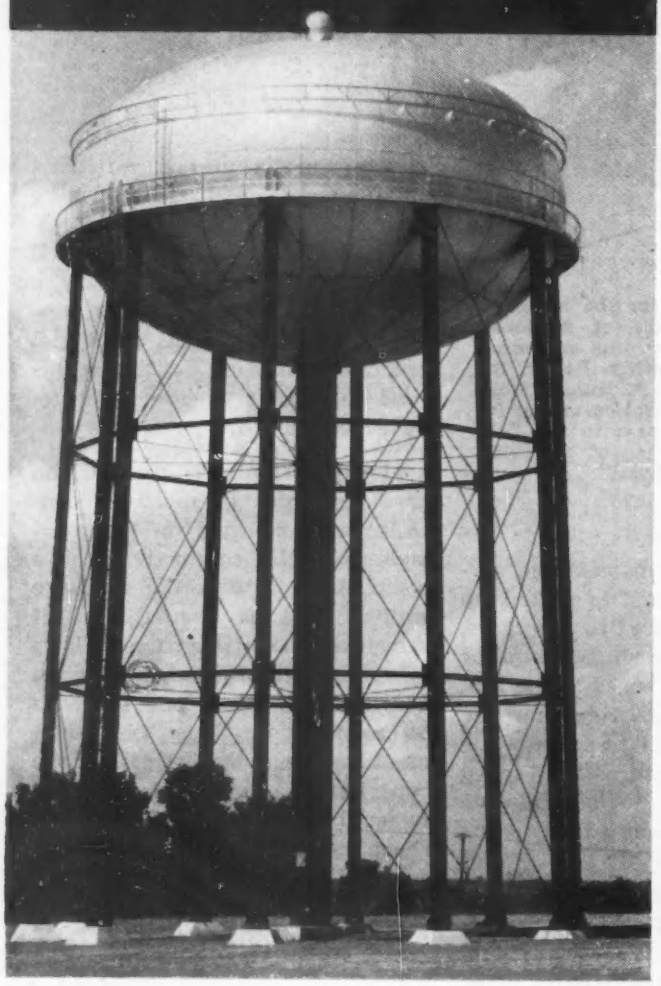
Moisture Controls. Most of the previous types of moisture controls have operated on the principle that the conductivity of a warp changes with the moisture content, and have used contact rolls through which a current flows to measure these changes. Fielden Electronics Inc. has come out with a measuring and control instrument based on measurement of the capacitance of a condenser, between the plates of which the warp sheet moves. Since the di-electric constant of water is very high compared with that of cotton, the capacitance of the condenser will vary with the moisture content of the warp.

This instrument is quite easily calibrated for changes in materials run. A dry sample of the material to be processed is placed between the electrodes, and a knob on the panel turned until the instrument reads "dry." Calibration units are also furnished so that the instrument may be standardized without a sample.

As far as the practical slasher man is concerned, except for the method used for calibration, this instrument indicates, records and controls in about the same manner as those already on the market.

Finish Level Control. Brown Instrument Co. has recently brought

TOPS IN TANKS



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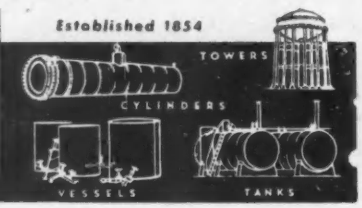
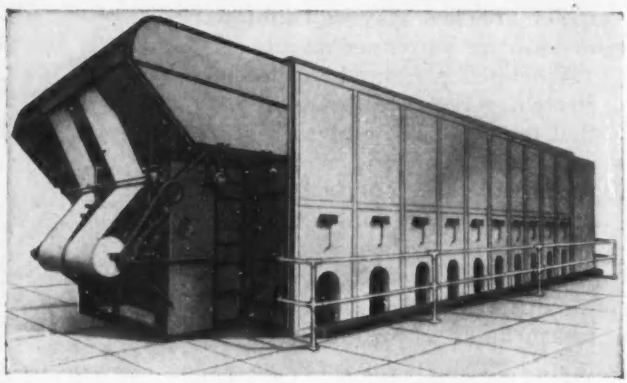


"NATIONAL" AUTOMATIC PIECE GOODS DRYERS . . .

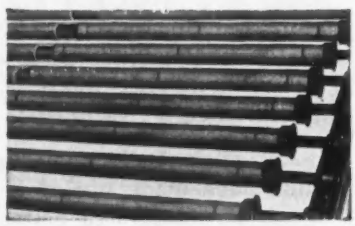


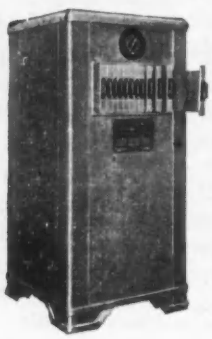
Featuring Innovations That Assure Lower Drying and Curing Costs, Constant Uniformity

These dryers were developed with one objective—to cut drying costs through faster, more economical operation, greater drying uniformity and the elimination of costly spoilage and re-runs. In the new Model E this is accomplished to an extent unequalled in any previous type.

DOUBLE-ACTION CONVEYOR POLES

Patented Rotating-Expanding Conveyor Poles that keep the cloth free from bar marks and creases as they carry it through the dryer in evenly-spaced festoons.





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out a control for size cooking kettles which utilizes measurement of pressure head to control the level of size in the cooking kettle. On pressing a button, the control adds a predetermined amount of cold water to the kettle, then shuts off the flow. After the size has been through the cooking cycle, another button is pressed, and the size mix is brought up to the proper finished volume by automatic addition of hot water.

All we need now is an automatic gadget which can lay in the lease on pattern goods.

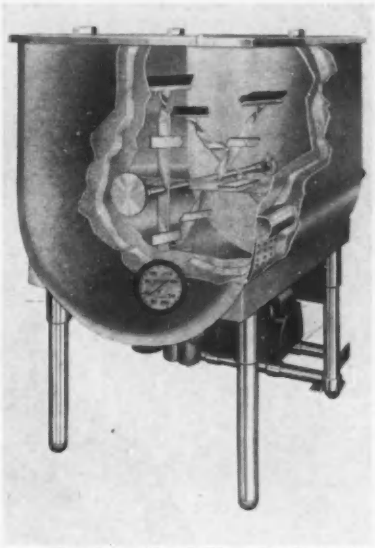
Squeeze Roll Covering. Wool slasher blankets normally are furnished in weights of from 13 to 18 oz. per yard. The heavier weights are recommended where it is desired to keep more size on the yarn. If the heavier weight does not dress off enough size, shedding may result, and may often be corrected by changing to a lighter weight blanket, which will give less cushion.

Generally a twill weave is used. Where a particularly careful job of sizing is to be done, a satin weave may be preferred, since it is claimed this gives less tendency toward lap marks.

In slasher blankets, the latest development is a seamless "boot," which is tailor-made to suit the squeeze roll diameter. It is stretched while drying, slipped on over the roll, and wetted to shrink fit it. Its greatest advantage is the complete absence of lap marks.

Horizontal Cooking Kettles. The "San-I-Tank" of the Metal Glass Products Co. is a newcomer to the sizing field, although it has been in use for some time in food processing. It is a horizontal, semi-cylindrical tank which is jacketed, instead of being equipped with a coil, and insulated with rock wool between the jacket and the outer metal surface.

A horizontal shaft is equipped with eight T-shaped stirring arms, having neoprene blades about a foot long which scrape the bottom and most of the side of the tank. This gives a tumbling action to the mix, and acts positively to prevent accumulation of starch lumps on the bottom of the tank . . . also,



Courtesy, Metal Glass Products Co.

Cut-away view of the "San-I-Tank" horizontal kettle for cooking size. It is jacketed and insulated with rock wool between the jacket and the outer metal surface.

since there is no coil, hard size cannot accumulate behind a coil. The kettle jacket does not go around the ends of the kettle, nor above the contact surfaces of the scraper blades, so that all of the heated parts are continually scraped, giving practically no caking tendency.

Nor can unmixed size collect in the valve opening, since the valve is the flush type, with its seal level with the bottom of the kettle.

Since it is a jacketed kettle, the volume of size after cooking will be slightly less than before—the reverse of what is experienced with open coil cooking. However, there is no reason why this should be a disturbing factor. In order to obtain comparable cooking rates, the steam pressure should be somewhat higher than with open coils using live steam.

Multi-motor Drives. One innovation in the slashing field which has proven its advantages is the all-electric slasher drive sold by Westinghouse. Here the question of whether or not to use is principally one of whether or not it is worth the comparatively high cost.

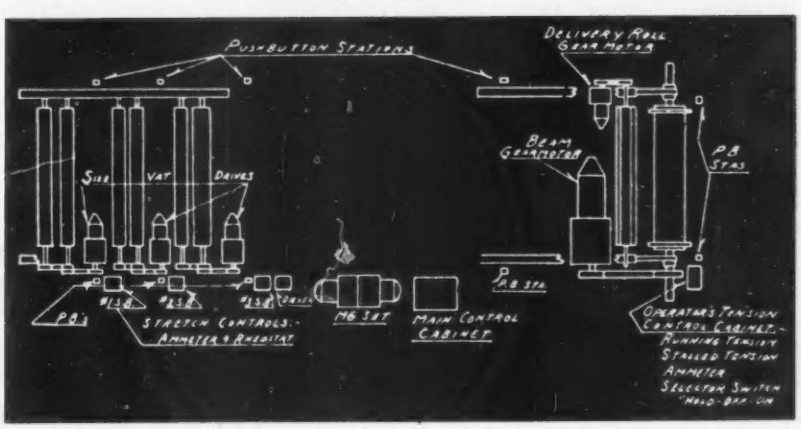
The principal feature of the Westinghouse drive is the elimination of the friction clutch on the loom beam, and the winding of this beam at constant tension by an electrically controlled variable speed motor. This eliminates the human element in controlling tension on the loom beam, and gives a package of even density from the start to the finish of winding, with no soft spots. Even where complex mechanical means are used to control the friction clutch to give even tension, this slipping clutch operates badly at slow speeds, and has a tendency to grab and chatter, which is not present with electric controls.

The manufacturers claim also that the even control of tension enables them to wind from 5 to 20% more yarn on a beam. The advantages of a uniform beam to the weaver are obvious.

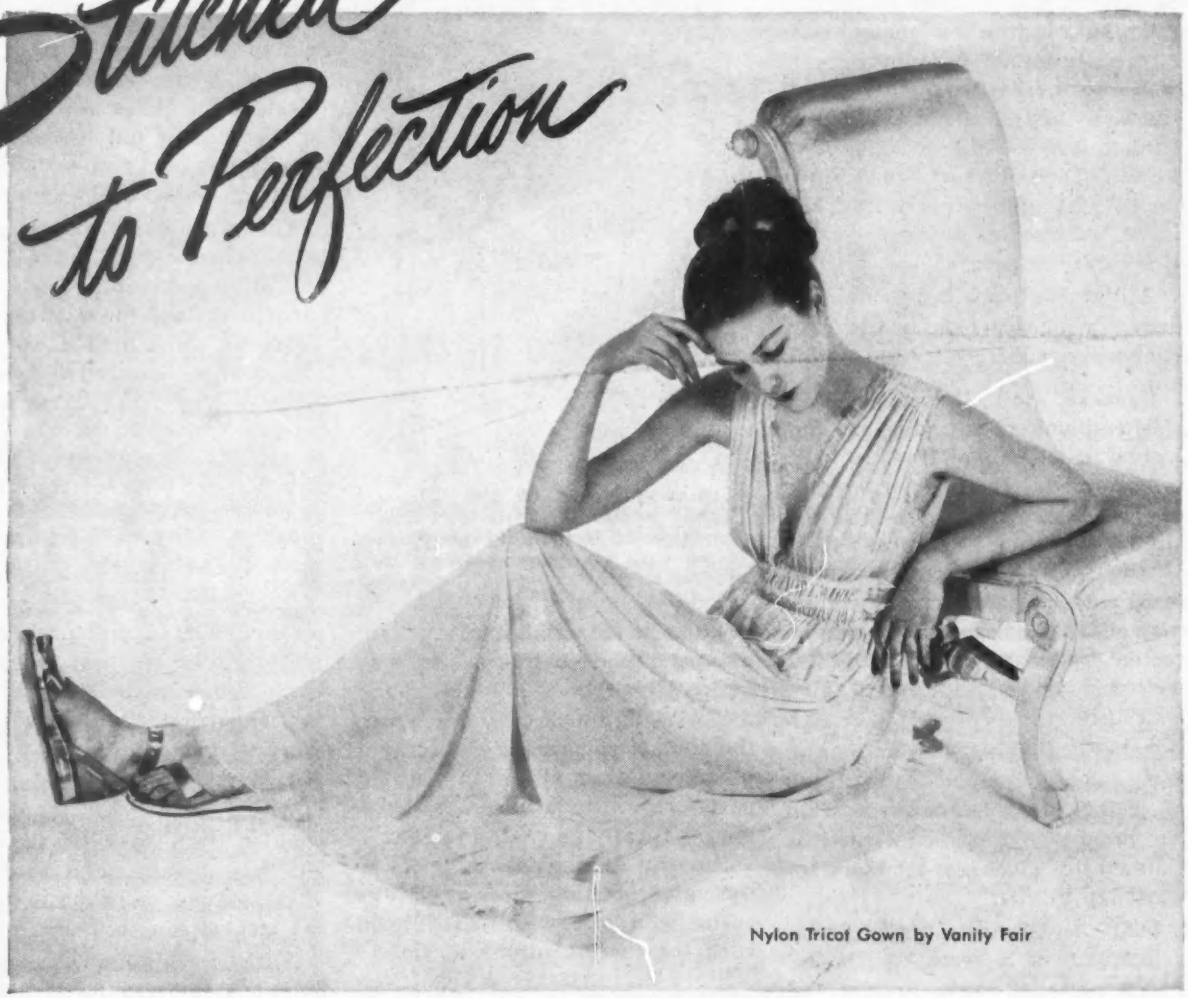
Although this single motor could be used to operate the slasher alone (with the yarn pulled through) or with mechanical drives for the rest of the slasher, it is normally operated in conjunction with a variable speed gear motor which drives the delivery roll, as it is otherwise

(*Continued on page* 170)

Sketch of Westinghouse multi-motor drive installation on a slasher equipped with an air dryer.



Stitched to Perfection



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Maintenance of Sewing Machines

By **HARVEY RUSSELL**
Willcox & Gibbs Sewing Machine Co.

THIS DISCUSSION is designed to aid in planning an orderly and systematic analysis of sewing difficulties. The suggestions offered are fundamental, and with slight alterations they are applicable to most sewing machines. In order to be specific, the Willcox & Gibbs Superlock machine is discussed. This modern high speed overseaming machine makes the United States standard stitch types 503, 504, and 505.

ECONOMIC sewing room production is affected by a number of interdependent factors. A basic factor is the working condition of the sewing machines. Although it would be difficult to cover all conditions that may be encountered, some primary considerations will be pointed out in an effort to be helpful to those engaged in operating and maintaining sewing machines.

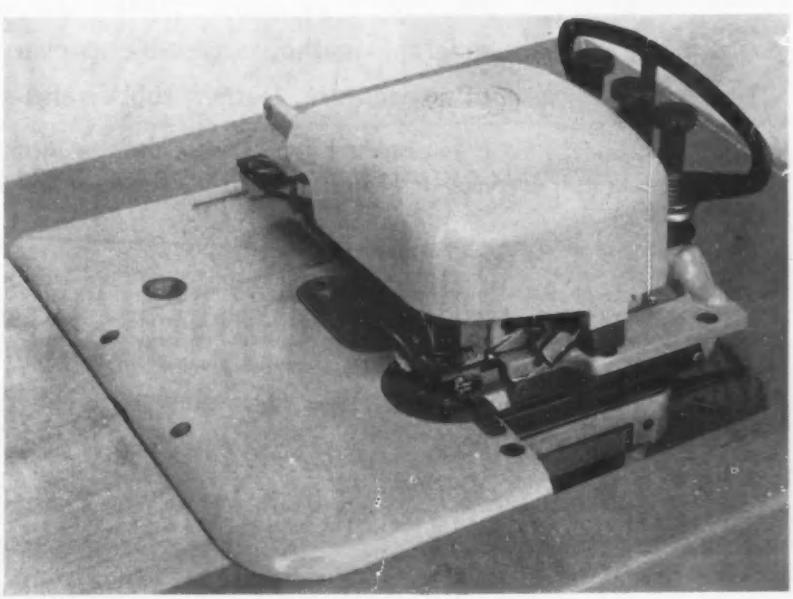
Mechanics, operatives, and others charged with the proper care and adjustment of the machines should be familiar with the standard adjustments and settings required on the machine. A careful study of the instruction book will be of valuable assistance in acquiring these facts.

The importance of keeping the machines clean and supplied with the proper amount of oil cannot be stressed too much. If these precautions are observed, the machines should run indefinitely without a serious breakdown. An excess accumulation of lint and dirt in the machine can become a packed mass that can prevent sufficient lubrication of moving parts running at high speed. If the accumulation of lint and dirt is removed at regular intervals, the mechanism of the machine can operate without interference and the oiling system can function properly, thereby preventing serious breakage of parts and many difficulties in sewing operations.

Lubrication. The Superlock machine is automatically lubricated by means of a force feed system utilizing a gear pump connected to an internal passage which directs the oil to the bearings. Hand oiling is not required. It is important to maintain the proper level of oil in the base, and when the machine is idle, the oil level should be high enough to cover the filter screen. All high speed machines should be lubricated with a good grade of oil of proper specifications. A viscosity of approximately 140 to 160 seconds at 100 degrees F is recommended.

The oil pump is operated by the same belt which drives the machine. Care should be taken to be certain that the machine belt properly engages the groove in the pump pulley and turns it in the direction indicated by the arrow. When the machine is in operation, oil should always be visible in the round sight gauge on top of the frame. If bubbles appear in this gauge, it is an indication that the oil supply is low or that the oil pump gasket is not properly seal-

Shown here is a modern Willcox & Gibbs Superlock sewing machine of the type discussed by the author.



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ing the oil pump lead in the frame.

Cleaning. Each machine should be cleaned thoroughly once a week. This operation requires only a few minutes, and it pays dividends to the operative and to the plant by assuring continuous production. The only preparations needed for cleaning are to remove the belt, release the frame latch, and lift the frame.

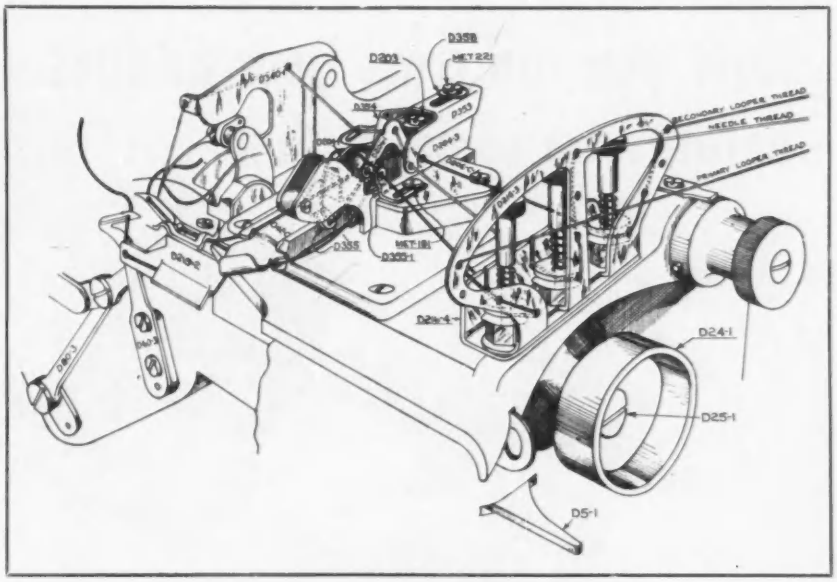
A major portion of the cleaning can be done with a soft brush. Where it is difficult to reach and remove the lint with a brush, a cleaning wire should be used. Compressed air should be uesd when it is available. If a cleaning wire is used, reasonable care should be exercised to guard against any damage to working parts.

Defective Work. When a machine suddenly develops skipped stitches or thread breaking, the trouble often can be traced to some simple defect. Do not alter adjustments or dismantle the machine until the following have been checked:

1. A bent needle.
2. A hook on point of needle.
3. Blunt point on needle.
4. Needle setting (is it as high as it will go?).
5. Lint, dirt, or oil between tensions. (To clean the discs, separate them with fingers and blow out dirt or lint.)
6. Check tensions and be sure the proper amount of tension is on all threads.
7. Check threading and be sure that the machine is threaded properly.

The machine should not be taken apart or tampered with by anyone other than those who are thoroughly familiar with its functions and adjustments. Under no circumstances should the operative be permitted to dismantle or remove parts from the machine.

If the machine does not function properly after the aforementioned checks have been made, the fixer should endeavor to locate the source of trouble by giving the machine a thorough examination. The accompanying check list should be a helpful guide in this instance.



This illustration shows the parts of the sewing machine appropriately labeled and numbered for reference in checking possible sources of trouble.

Needle Timing. If retiming should become necessary, the following instructions are given for reference. Remove needle arm crank cover D42-C. With needle at highest position, loosen needle arm crank clamp screw D55 through large hole in needle arm bracket D40-3. Adjust small needle arm screw MET 54. Turning screw nearest front of machine clockwise and back screw counterclockwise will lower the needle; whereas turning back screw clockwise and the front screw counterclockwise will raise the needle. Tighten clamp screw slightly, turn machine until needle is at its lowest position. At this point, the distance between the bottom of the needle hole piece and the center of the eye of the needle should be .285

After the adjustment, securely tighten the clamp screw against the shaft. Otherwise, the needle arm will change its position when operating at high speeds. The timing should be checked again after screws are tightened to make sure needle enters the center of the needle hole.

Primary Looper Timing. The primary looper is adjusted by loosening screws D63-S and moving looper to right or left as desired. When the primary looper is at the

CHECK LIST FOR SEWING MACHINES

1. Check the looper and be sure it is smooth and free from dents, rough spots, and sharp edges which can cause both thread breakage and skipped stitches. The shape of the looper should not be changed.
2. Check the edge of the needle hole near the throat plate. It must be smooth and free from sharp edges or burrs. Be certain that the needle enters the needle hole in the plate with at least sufficient clearance for the thread to prevent pinching the thread at this point.
3. Check timing of needle, primary and secondary looper. Retiming this machine should rarely be necessary since the needle, primary and secondary loopers are self setting and can be removed and replaced without interference with the timing.

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Supreme's new Model SA-ROF helps you cross your "demand" bridges and join a select group of farsighted, hard-hitting knitters. No matter whether it is variable striped jersey . . . widely spaced "floatless" designs . . . or colorful plaids and checks . . . with this one (1) machine you are always ready to handle all the needs of your customers.

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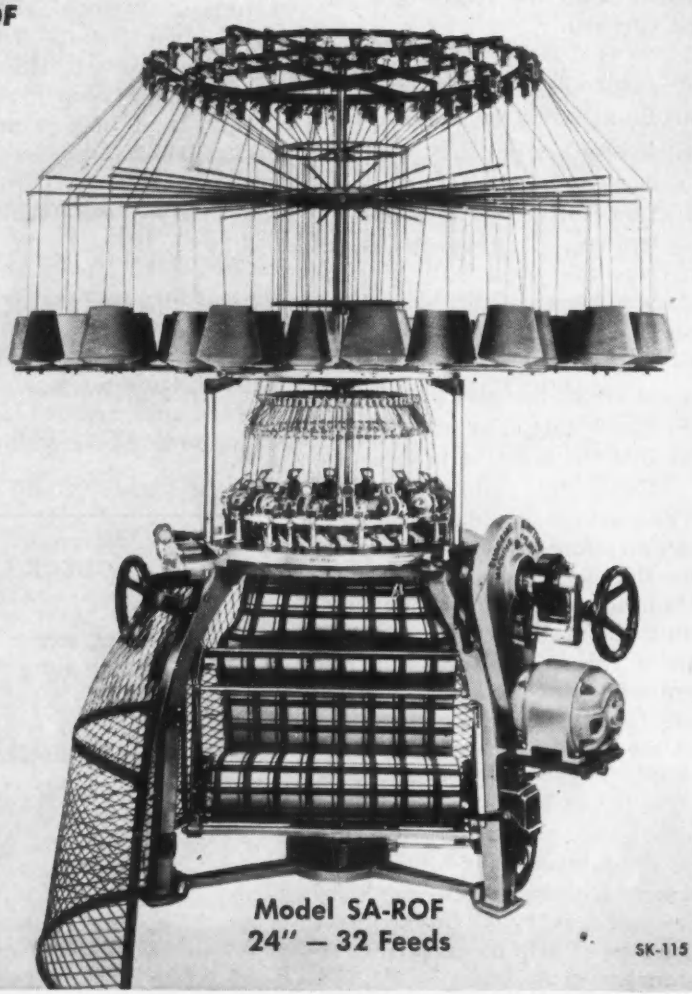
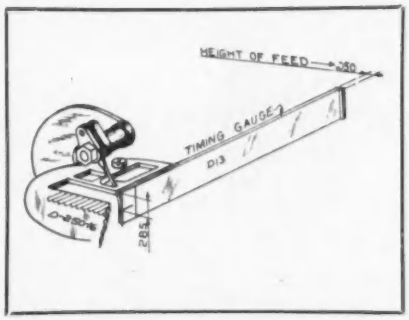
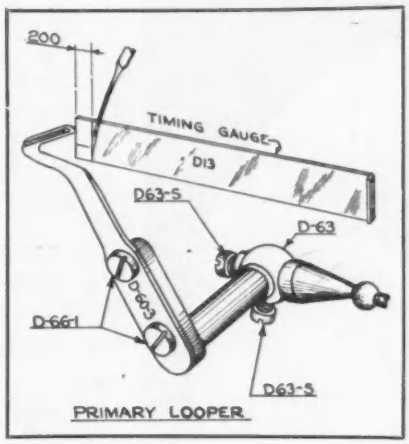


Model SA-ROF
24" — 32 Feeds

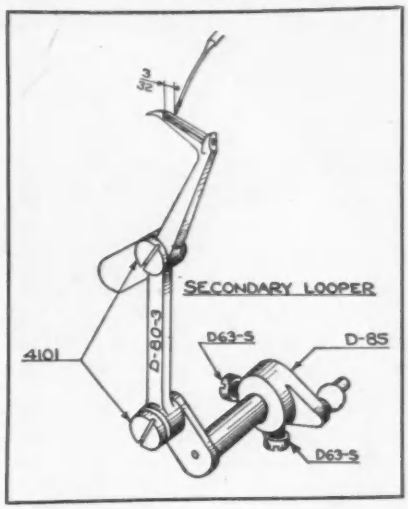
SK-115



The timing gauge is shown in position to measure the distance between the bottom of the needle hole piece and the center of the eye of the needle. The distance should be .285 when the needle is in its lowest position.



With primary looper at extreme left position, the distance between point of looper and center of needle should be .200, as shown.



With secondary looper at extreme left position, the distance between the center of the eye of the secondary looper from the center of the needle should be .093 or 3/32".

extreme left position, the distance between point of looper and center of needle should be .200. When the looper is correctly timed, the point should barely contact the needle (.005) as the point of looper passes center of needle scarf.

Secondary Looper Timing. The secondary looper is adjusted by loosening screws D63-S and moving looper to right or left as desired. With secondary looper at extreme left position, the distance between the center of the eye of the secondary looper from the center of the needle should be .093. When correctly timed, the ball of the looper should deflect the needle slightly as it passes.

Feed. Securing the correct height of the feed is important. Normally, the feed should be .050 above the needle hole piece with the foot raised and the feed in its highest position. If the feed is set too high, there will be a slight backward movement of the fabric as the feed drops down for its return movement. Any tendency to back-feed may cause skipping of stitches regardless of other adjustments.

Feed teeth should be even, level and sharp enough to feed the work without cutting the fabric. If it is necessary to change the height of feed, loosen clamp screw MET 26 (B169) and adjust set screw 8008-L. Feed surface can be adjusted higher or tilted in front or back with this adjustment.

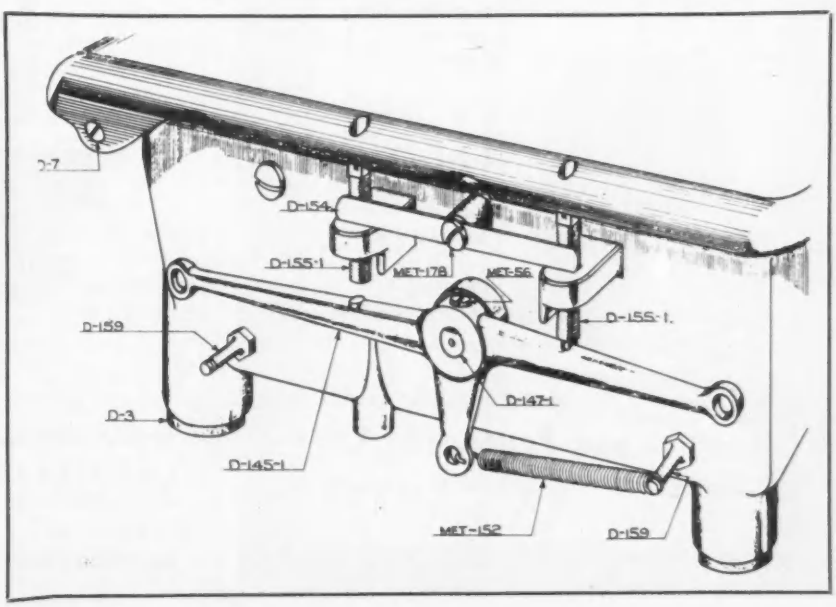
If the machine has a differential feed, it can be adjusted with differential operating lever D145-1 to obtain greater movement of front feed.

Length of Stitch. To regulate length of stitch, lift frame and loosen nut No. 40 at left hand of main shaft and adjust screw D36-1. Turn clockwise to shorten stitch and counter-clockwise to lengthen stitch. As a precaution, nut No. 40 should be securely tightened before running the machine.

Trimming Blade. To insure production of goods with clean finished seams, the trimmer blades must be kept sharp at all times. Dull blades may cause the machines to become clogged, and poor feeding or skipping trouble may develop.

Presser Foot. The pressure on the foot must be sufficient to act positively with the feed to accurately feed the work at the highest speed at which the machine is operated. Frequently, machines sew accurately at a moderate

If the machine has a differential feed, it can be adjusted with differential operating level D145-1 to obtain greater movement of front feed. The lever is shown here in its relation to other parts of the machine.



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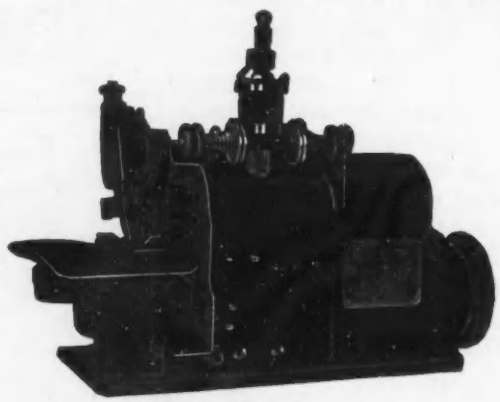

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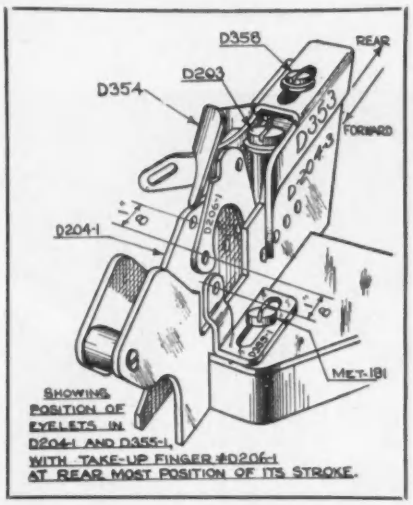


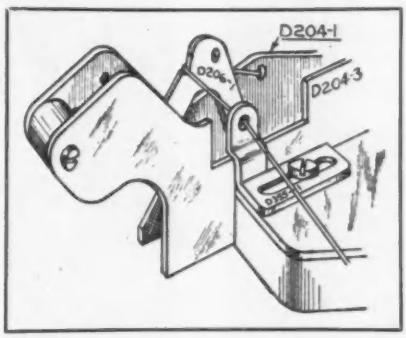
The position of the thread guide determines the amount of thread pulled from the supply. The correct setting is shown in this illustration.

speed but not when the speed is increased. This can be caused by the presser foot not following the feed up and down at high speed. The pressure on the presser foot can be regulated by adjusting screw D179-2.

Thread Handling Parts. The positioning of thread guide D204 (complete) should be made when the take-up finger D206-1 is at the rearmost position of its stroke. With the take-up finger in this position, set the thread guide so that the primary looper thread hole in D204-1 is 1/8-inch to the rear of lower or front hole in the take-up finger.

The position of thread guide D353 in relation to take-up finger D206-1 determines the amount of thread pulled from the supply. Therefore, the farther forward the guide D353 is adjusted, the tighter the needle thread will be and the more to the rear it is adjusted, the looser the needle thread will be.

The primary looper thread is pulled from the supply by the forward movement of the take-up finger D206-1 in relation to the eyelet D355-1 and hole in D204-1. It is then held under control by the upward movement of take-up finger after the thread has engaged the notch in the take-up finger.



As shown here, the primary looper thread is properly engaged in notch of take-up finger D206-1.

The thread should be released from the notch as the needle reaches the bottom of the stroke. The action of the eyelet which carries the thread in take-up finger D206-1 (in relation to the eyelet D355) sets the primary looper thread. The primary looper thread must be released by notch in take-up finger before the needle starts its upward movement

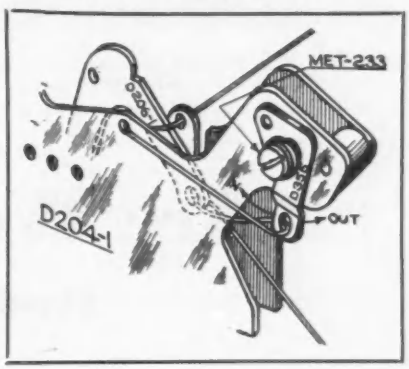
Eyelet D355 is adjustable and will allow more or less take-up action. Thus, tight or loose primary looper thread can be obtained without adjustment of tensions.

The secondary looper thread is pulled from the supply by the action of the rear face of the take-up finger D206-1 against the thread in its backward stroke. The series of holes in guide D204-1 and D204-3 will allow the proper threading to obtain the correct supply of thread for stitching.

Needle thread loop controller D354 seldom requires adjustment. Its purpose is to control the needle thread to prevent it from looping or kinking when the needle is making its upward stroke.

To minimize maintenance, it is good practice to forego dismantling until the simpler sources of trouble have been checked.

Primary looper thread adjustable guide D355 is shown here. To tighten thread, adjust out. To loosen thread, adjust in.



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Short-term Coverage Marks Yarn Sales

Knitters' purchases of yarn remain mostly for near-term deliveries. Coverage seldom has exceeded 45 to 60 days, except where government contracts have had to be considered, or where special yarns are involved. Supply has continued plentiful. Prices eased off a little further during the past several weeks.

Yarn rates in general are down five or ten cents when compared with a year ago, but knitters still seek concessions. Re-sale of surplus stock yarns helped to weaken prices last fall. Part of this surplus consists of yarn assembled months ago for export demand that failed to materialize. From the pricing angle nearly every order has been subject to negotiation.

The kinds and counts of yarn in which labor cost is least have become fairly well stabilized recently and there have been fewer reductions among the medium numbers, but yarn of finer twist has not been in active demand over a considerable period, hence competition has continued to depress prices. Tinged and part-waste descriptions remain very confused as to prices. Recently small-lot orders became more numerous, but the range of selling prices was less satisfactory to spinners.

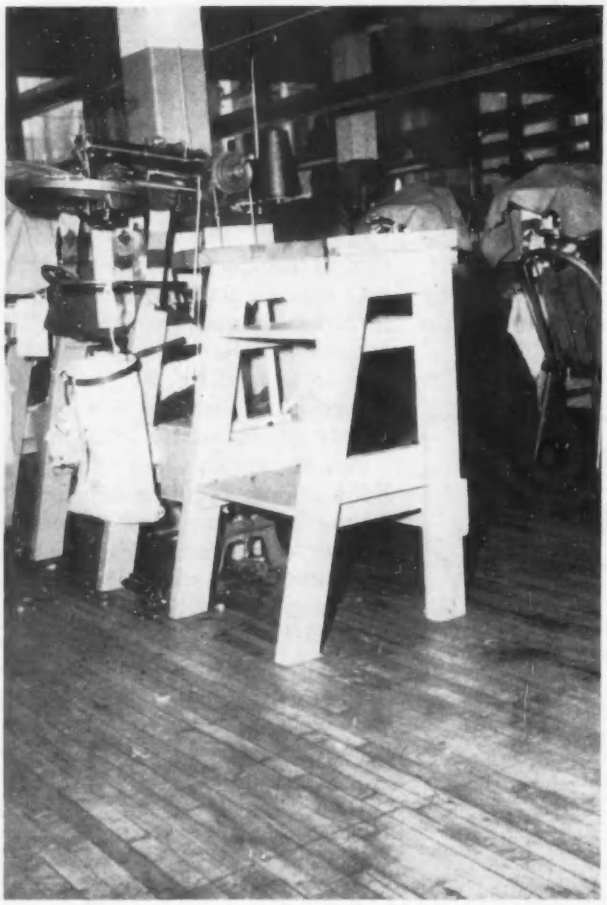

Fig. 1. The wooden frames for loopers, which were built first.

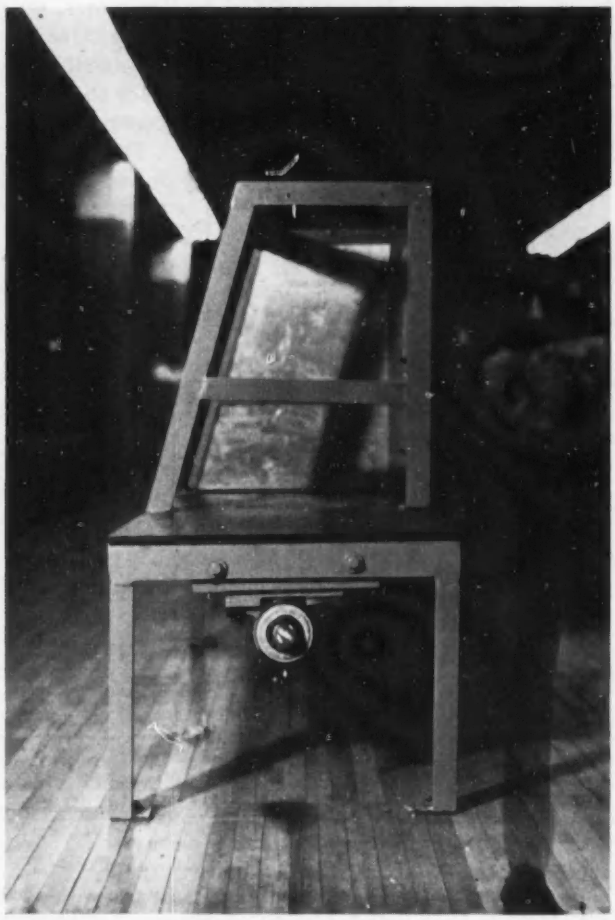

Fig. 2. Arc welded looper frames which superseded those of wood.

Arc Welded Looper Stands

Reduce Accident Hazard

By WM. C. REEDEN*

Supervisor of Welding & Maintenance Dept.
Phoenix Hosiery Company, Milwaukee

[*Editor's Note: In a recent issue (Dec. 1948), an article by William C. Redeen of Phoenix Hosiery Company described procedure for making welded steel frames for the seamless knitting machines in the plant. Purpose of the frames was to eliminate the accident hazard when a fixer worked close to the line shaft, to offer better housekeeping conditions, and to prevent knitting machines from being jerked from the floor by broken belts.*

In this article, the author describes the procedure for making welded steel frames for loopers.]

OUR FIRST effort to correct conditions at the loopers consisted of erecting extensive and expensive wooden frames to fit over the line shaft, and then to set the machines on the frames at the proper height. (See Fig. 1).

This arrangement improved the appearance, but the housekeeping conditions were still not up to par.

*Data and illustrations were taken from a study submitted to The James F. Lincoln Arc Welding Foundation by the author, in its recent $200,000 Design-for-Progress Award Program for reports on advances and improvements made by the applications of arc welding in design, fabrication, construction, and maintenance.

The Horse and Wagon Fund Bought These Trucks

Last night the truckers' association gave a testimonial dinner for Bert Price. You'd never think he owned a fleet of two hundred truck-trailers, covering a half dozen states with freight lines. Bert, jovial and graying, had a pleased twinkle in his eyes when he stood up to speak. Bert started with a horse and wagon and had been hauling freight and merchandise for more than forty years. They asked him about the secret behind his successful business.

"Guess you might say it was my *new horse and wagon fund* that was responsible," he said, smiling. "I always kept a separate fund for new hauling equipment. My competitors heard about it and kidded me from time to time.

"When the horse and wagon went out in favor of the motor car and truck, I still kept putting away money in my *new horse and wagon fund*. When it became necessary to replace worn-out equipment, the money needed was there ready for me. I've still got my *new horse and wagon fund*. And those competitors who used to kid me—well, I bought them out when they didn't have the money to replace their equipment."

Take a look at your last Financial Statement. Do you really have the money that you charged off for Depreciation in the past years? Is it part of your "current" assets . . . or is it earmarked as a separate fund under "fixed" assets?

Write today on your business stationery for your copy of "Good Housekeeping in Business" —a pamphlet which presents what we believe to be a *logical* basis for handling depreciation money. We will be glad to send it to you.

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Also, operatives needed additional working space. The cost for the wooden frames alone was $180.00 for a line of 12 machines.

Upon purchase of an arc welder, and following the training of our maintenance staff in its use, we made arc welded frames of 2x2x¼-inch mild steel angle. The frames were welded in 8-foot lengths so that the lines could be made any length in units of two, giving the machines 4-foot centers.

These frames may be seen in Figs. 2, 3, and 4.

The cost of these frames was $158.88, which was a saving of $20.12 over the wooden frames, for 12 machines.

The motors were set on the end, off the floor, and the shaft was mounted as shown (see Fig. 4).

Even if no money had been

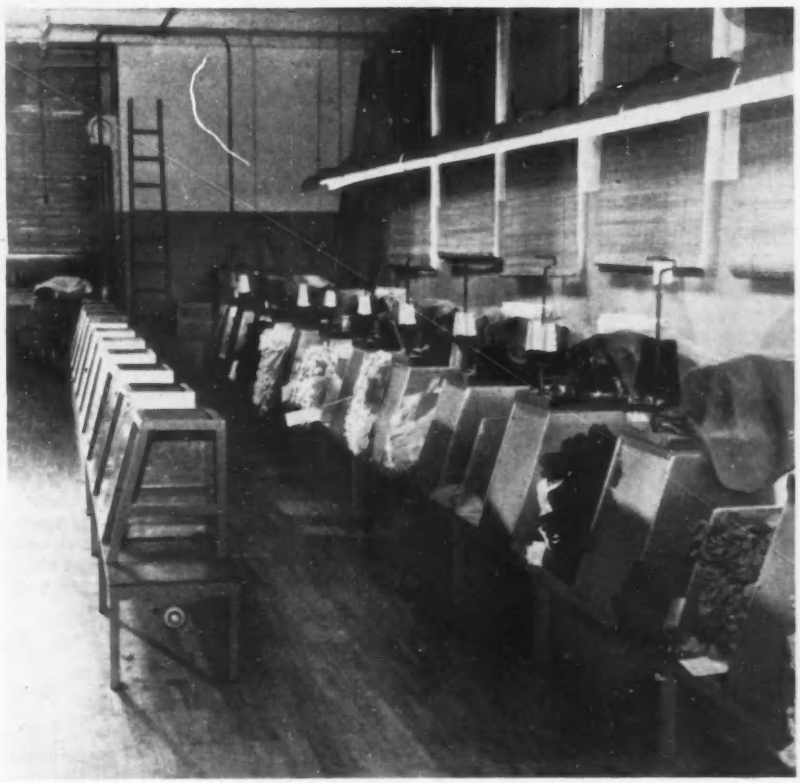
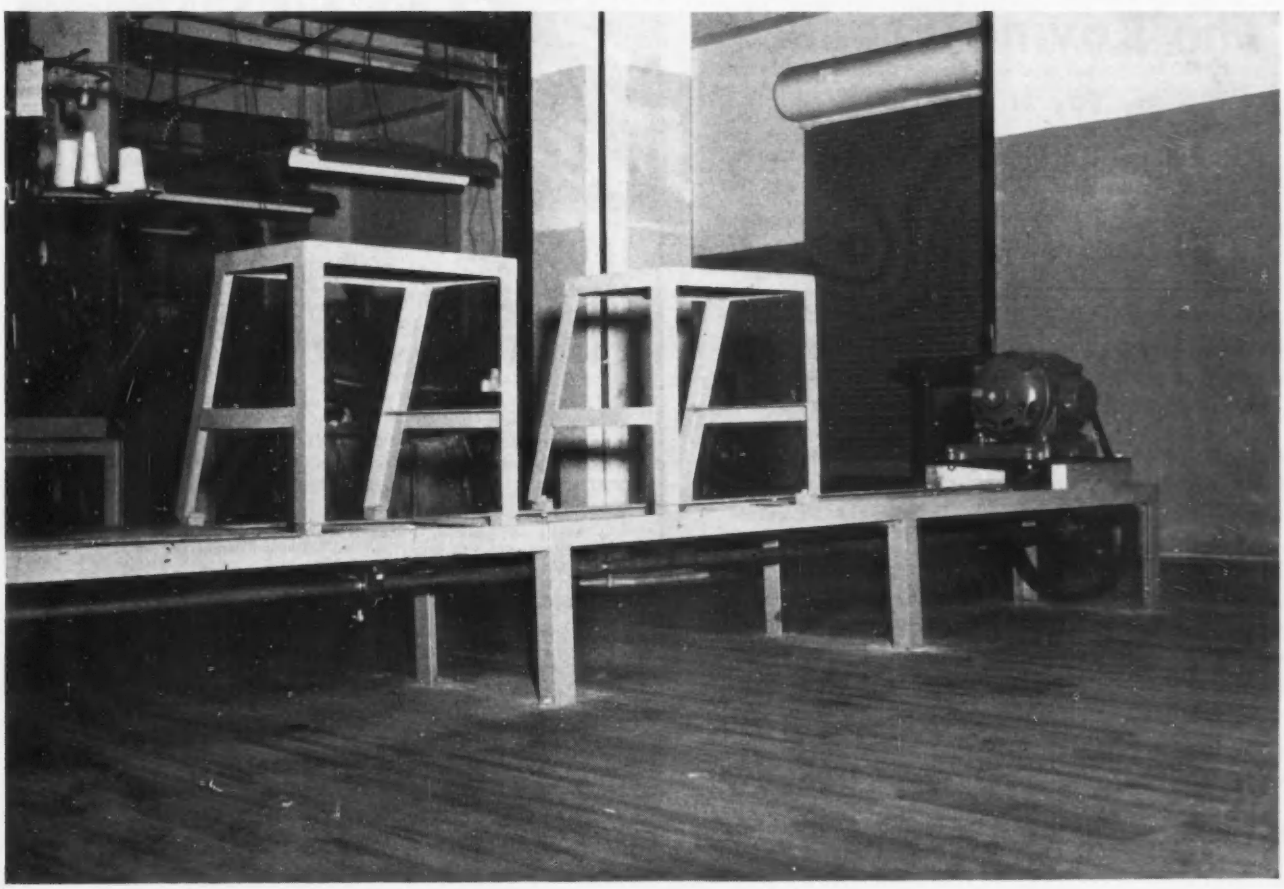


Fig. 3. The looper room, showing the new welded frames. Note adequate working space for operatives.

Fig. 4. Close-up of welded looper frame, showing mountings for line shaft, motor, and looper.



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This is a reprint of 26 pages 8½ x 11 of a series of articles which were previously published in "Textile Industries," containing valuable information, illustrations, tables, charts and diagrams.

Fay H. Martin is a recognized authority on the roving frame. This book has been adopted by textile schools and vocational schools. May be secured in conjunction with a 3-year subscription to "Textile Industries" for $5.00 (Foreign, $11.00).

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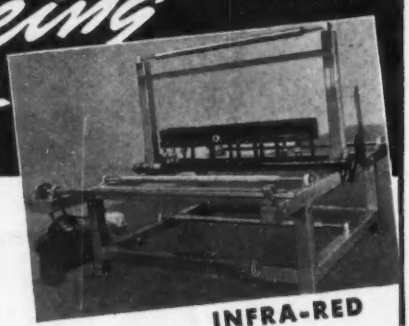

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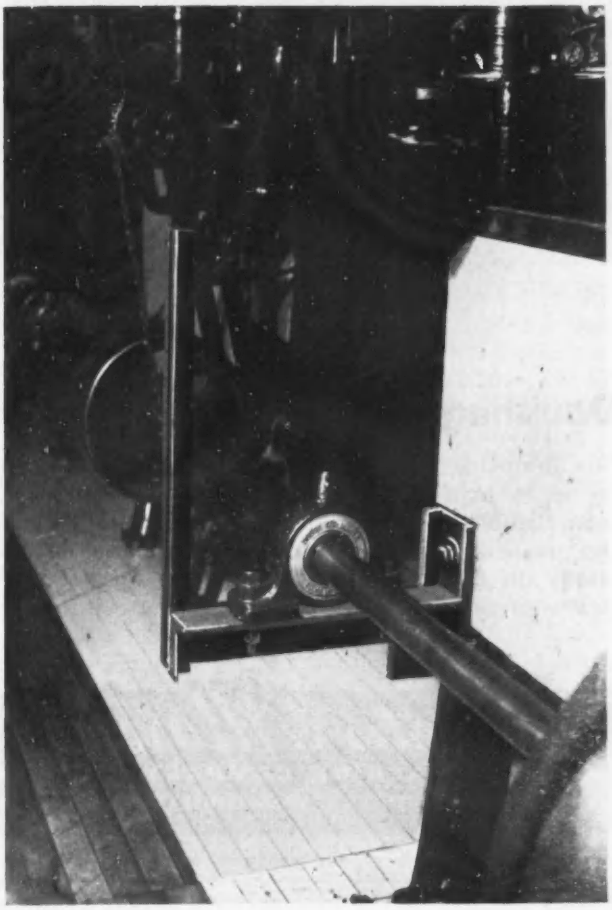

Fig. 5. On knitting machines having four solid legs that are strong enough to take on extra weight, T-brackets are welded and bolted to the leg of every other machine, to mount the driving shaft.

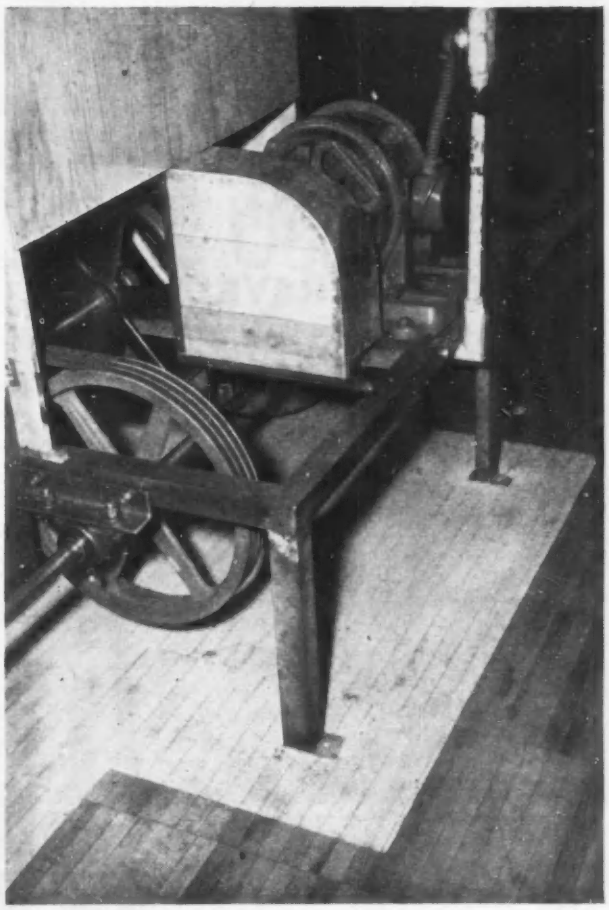

Fig. 6. Welded bracket for motor stand. A work cabinet is placed over the pulleys for protection. All arc welding work was done by maintenance staff.

saved on these frames, the safety and housekeeping factor was well worth the change.

We have new knitting machines with four solid legs that are strong enough to take on extra weight, so instead of putting them on frames, we weld T-brackets of angle iron and bolt these on one leg of every other machine, mounting the driving shaft on these brackets. (See Fig. 5).

In addition, we also weld a square stand 39x39 inches and 18 inches high, and place this as near the center as possible for the motor and drive; a work cabinet is placed over it for protection. See Fig. 6.

By this system we have a compact line and almost everything is off of the floor.

No one has as yet been injured on one of these lines, even though we still must guard them further in front. Power factor is greatly improved.

Inasmuch as there are no twisted belts now, the belts last much longer.

Full-Fashioned Carrier Tube Rings Provide Stable Tension

Stable tensions have long been a problem on full-fashioned carrier tension rings. Results of tests on the new AlSiMag carrier tension rings indicate that the new rings eliminate all tension problems formerly encountered, according to the manufacturer.

These tension rings are hard and homogenous. They are highly polished to reduce the possibility of fluctuation of tension.

The extreme hardness of this material and performance of AlSiMag guides in similar applications leads to the conclusion that it may require several years to determine the service life of the rings, according to the manufacturer.

American Lava Corporation, Chattanooga, Tennessee.

For additional data, request item A-127, using business reply card on page 189.

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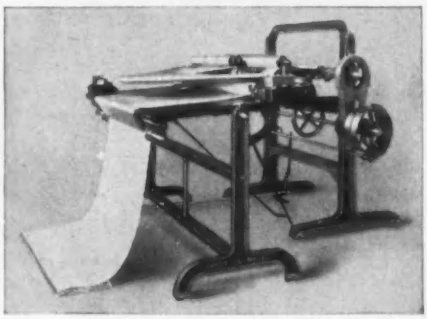

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AN EYE ON THE

KNITTING MILLS

W. B. Davis & Son, Inc., Fort Payne, Ala., men's and children's cotton-wool seamless hose, has been acquired by new interests, headed by Clyde Watkins, Fort Payne, and associates. A new company has been organized under the name of W. B. Davis Hosiery Mill, Inc., but the present line of manufacture will be continued.

Shannon Hosiery Mills, Inc., Columbus, Ga., women's full-fashioned hosiery, has rejected bids recently received for a one-story addition to the mill, and the project will be deferred until further notice.

Panda Knit Mfg. Co., Inc., Springfield, Mass., has been chartered with a capital of 200 shares of stock, no par value, to manufacture knit goods. Archie Ducharme, Jr., is president.

United States Knitwear Co., New York, N. Y., has purchased a 12-story building in New York, and will improve and equip for early occupancy. Expanded capacity will be carried out.

Vetro Hosiery Mills, Inc., recently chartered with a capital of $100,000, plans operation of a mill in the vicinity of Clemmons, N. C. Paul and Rufus Barnes, both of Winston-Salem, N. C., will head the new company.

Van Raalte Co., New York, N. Y., has completed the installation of 10 machines in the new mill in Franklin, N. C., and production of full-fashioned nylon hosiery for women is now underway.

Empress Knitting Mills, West Conshohocken, Pa., women's full-fashioned hosiery, have awarded contract for a one-story addition, including improvements in the present mill building. The cost is estimated as close to $75,000, with equipment.

Duracraft Knitwear Co., knitted cloth specialties, which is an interest of Champion Knitwear Co., Rochester, N. Y., has purchased a factory at Livonia, N. Y., and will improve and equip for a new mill. The building was formerly occupied by Hickock Mfg. Co.

Erwin Hosiery Mills, Inc., has been chartered with a capital of $300,000 to operate a knitting mill in Graham, N. C. J. Z. Erwin and George Long, both of Burlington, N. C., are the principal incorporators.

Gotham Hosiery Co., Philadelphia, Pa., women's full-fashioned hosiery, has plans underway for a one-story addition to the finishing mill, reported to cost about $150,000, with equipment.

Orient Hosiery, Ltd., of Canada, the newly-formed, wholly-owned subsidiary of Canadian Silk Products Corp., Sherbrooke, Que., has plans to construct a full-fashioned nylon hosiery plant at Brockville, Ont. The cost is estimated at $2,000,000.

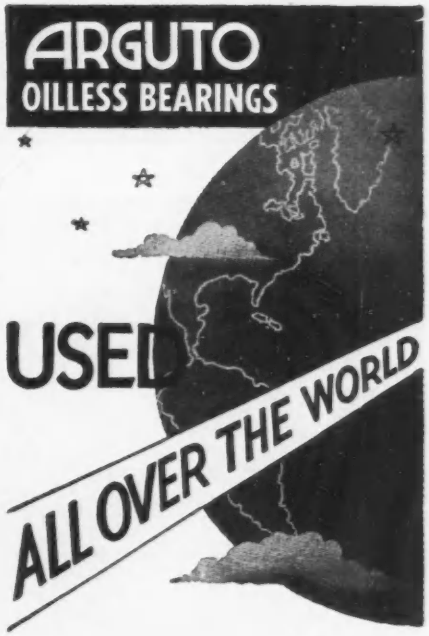
Cherry Knitting Mills, Philadelphia, Pa., is a new concern knitting bathing suits, sweaters and shirts. It was formed by Sydney and Ben Cherry, partners in the recently liquidated Everlastik Knitting Mills.

Knitters Building for Future Profits

In the textile-apparel field one thing that was predicted for the postwar time that attracted greatest interest, was the urge among manufacturers to modernize plant and equipment and branch out into new lines and markets. In the knitting industry this trend is now seen to have progressed further than elsewhere.

This is partly due to the individual enterprise of the manufacturers, but also in large measure to a fortunate turn in styling and fashions in knitwear.

One authority recently pointed out that daily newspaper advertising, and similar copy carried in weekly and monthly periodicals, features knitted goods for a vast array of uses, mostly of improved kinds and better quality.



..IN MANY DIFFERENT

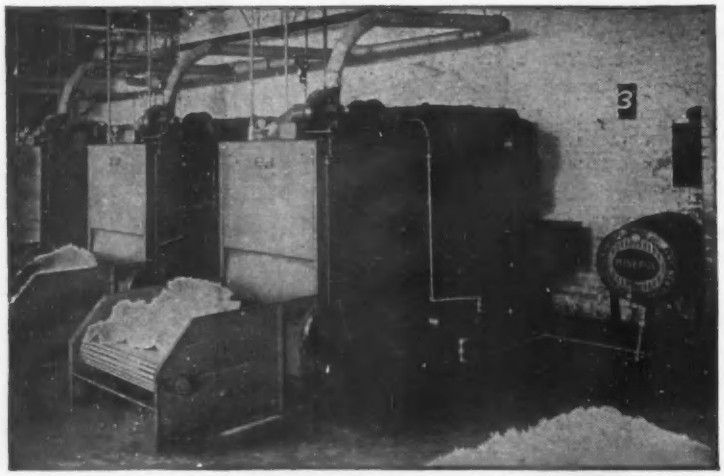
APPLICATIONS

"OUTWEARS THE BEST BRONZE METAL"

20 years without a drink—

ARGUTO OILLESS BEARING CO.
WAYNE JUNCTION PHILADELPHIA

MINEROL FIRST and FOREMOST CONDITIONING AGENT for Textile Fibres.



● **MINEROL** is a prepared agent for conditioning textile fibres..a systematic Process of Spraying Natural and Dyed Raw Stock. • **MINEROL** helps to separate long fibres from the short. It saves *good fibres* and prevents waste. It makes fibres more supple..more pliable.• **MINEROL** provides *control* of conditions caused by static electricity. It protects the cards and preserves the wire. • **MINEROL** prevents Dust and Fly..safeguarding health and insuring better working conditions.• **MINEROL**..as a conditioner is more urgently in demand thru the increased use of staple Cut Rayon and its varied combinations with cotton, wool and other fibres.

BRETON MINEROL PROCESS PATENTED

BORNE SCRYMSER COMPANY

Originators of the BRETON MINEROL PROCESS for CONDITIONING FIBRE

ELIZABETH, N. J. CHARLOTTE, N. C.

NEW ENGLAND REPRESENTATIVES

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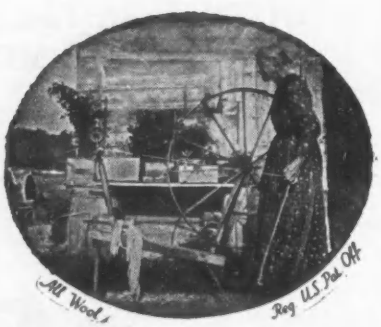
SOUTHERN REPRESENTATIVES

W. E. SMITH, Charlotte, N. C. JOHN FERGUSON, LaGrange, Ga. CHARLES KELLEY, Charlotte, N. C.



KNOXALL

ROLLER, SLASHER AND CLEARER CLOTH
ENDLESS BLANKETS RAYON SLASHER JACKETS
ENDLESS REVOLVING CLEARERS

EDWARD H. BEST & CO.

Est. 1888 BOSTON, MASS. Inc. 1901

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Allendale 1-3521

GREENVILLE, S. C.
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1 Pendleton Street
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Knitting and Warp Yarns

4's to 30's

AVONDALE MILLS

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COMER-AVONDALE MILLS, INC.

Boston — Chattanooga — Chicago — Charlotte
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INDUSTRIAL ENGINEERS

One-Third of a Century

Specializing in Textiles for over

Ralph E. Loper Co.

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PAY ROLL CONTROLS
WORK LOAD STUDIES
COST SYSTEMS
SPECIAL REPORTS
COST REDUCTION SURVEYS

This applies to underwear, both for men and women, and hosiery and knitted outerwear and sportswear. In the women's field, it is stated, progress in offering new diversions from the old style set-ups never ceases. One reason is that newer machinery now is more readily to be had, offering greater possibilities in diversion of end-products.

The latest versions of the tricot equipment furnish an example of this, it is asserted. New yarns like nylon seem to fit in nicely with the current developments in machinery, which often give a hint that the machinery designers actually are the ones who forecast style trends in the knitwear field.

At least it can be stated on good authority that improvement in the yarns, including rayon and the natural fibers, has so far aided manufacturers in making the most of the improvements in machinery and production technique.

In all this—the heavy investment in new equipment and buildings; the modernization of existing facilities that can be adapted to better uses; the constant search for new products and wider markets—the knitwear industry is seen to be laying the foundation for future profits, in addition to safeguarding against the strains and stresses of a possible economic adjustment later on.

Sound Judgment Needed, Knitwear Buyers Say

It goes without saying that the manufacturers and distributors of knitwear are anxious about advance orders for merchandise to be offered by the retail trade next spring. Coverage this far ahead already has been unusually delayed.

In some lines it is expected that during January their customers will make a beginning of liberal buying for late winter and spring requirements. It is admitted that the mills and middlemen have been through such emergencies before, but they have been absent over the last eight years (during the war and postwar period). In addition, there are some developments that were not present during the years immediately before the last war.

In the present circumstances,

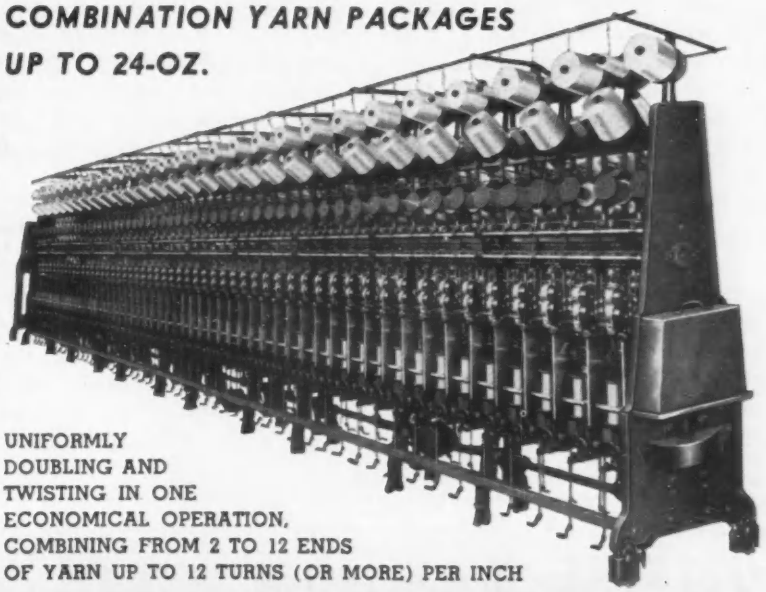
ECONOMICAL... DEPENDABLE... TROUBLE-FREE...

PRODUCING PROFITS in throwing mills throughout the world!

U.S. ACME

DOUBLER TWISTER

FOR STEADY, LOW-COST BUILDING OF COMBINATION YARN PACKAGES UP TO 24-OZ.



UNIFORMLY DOUBLING AND TWISTING IN ONE ECONOMICAL OPERATION, COMBINING FROM 2 TO 12 ENDS OF YARN UP TO 12 TURNS (OR MORE) PER INCH

a newly improved, versatile production unit!

CONSTANT SPINDLE SPEED—80 to 110 individually controlled spindles (plain or roller bearing) accurately tensioned to driving belt!

SPINDLES AVAILABLE — Marquette roller bearing spindles are available with each machine!

ACCURATE CENTERING OF BOBBIN —perfectly balanced spindle swing unit gives accurate centering throughout length of traverse stroke!

AUTOMATIC BELT TAKE-UP provides a constantly uniform belt tension!

STEADY TRAVERSE ACTION from newly improved cam unit!

UNIFORM BUILD on any size bobbin delivered by unique traverse angle lifter motion unit!

AUTOMATIC STOP MOTION individually controls each spindle and feed roll unit, eliminating singles and roller laps, minimizes yarn loss!

POSITIVE YARN SEPARATION—feed roll assembly designed for positive yarn separation and quick removal of yarn in event of roller laps!

CREELS designed to meet each mill's package requirement!

UNIFORM BALLOON assured at all times!

COMPLETELY HOUSED twist unit and back idler prevents yarn spoilage from leakage of lubricant!

QUICK-TO-CHANGE TWIST GEARS—only one gear to change for each given twist!

NEW, OPTIONAL, STATIONARY RING HOLDER eliminates ring vibration and handles heavier denier yarn without ring hesitation in the downward stroke!

MODERN THROWING EQUIPMENT FOR PROFITABLE PRODUCTION

• Cuts Operating Costs • Boosts Production & Quality • Reduces Maintenance

WRITE FOR ILLUSTRATED BULLETIN!

U.S. TEXTILE MACHINE CO.

700 Gilligan St.—Scranton 8, Pa., U.S.A.

with food and housing costing plenty plus the fact that the demand in this country that accumulated during the war for durable household items ("big ticket" merchandise) has depleted the share of the consumers' dollars for "soft" goods (household textiles, etc.), there naturally has been diminished interest in knitwear of all sorts. This has led to dislocation of prices in the supplying lines, such as yarns, etc., adding to the manufacturers' perplexities.

As a consequence, many of the retailers have been exploiting this condition for their own advantage, as it is their right to do. In all of the previous adjustment periods, these same elements have been active and they always have had to be taken into consideration in the planning that is necessary to move along and go ahead.

In detail, large retailers have remained since last spring very selective as to the type of merchandise they wanted to stock, and wholesalers in general have not been able to plan confidently ahead. So far as knitwear is concerned, it is assumed that the average distributor will carry less inventory into the new year than he carried into 1948.

As to spring and late winter merchandising supplies, it is clearly apparent that the majority of distributors intend making no change in their present arrangements before January. Even then, some observers state, they expect price considerations will still be uppermost in most transactions.

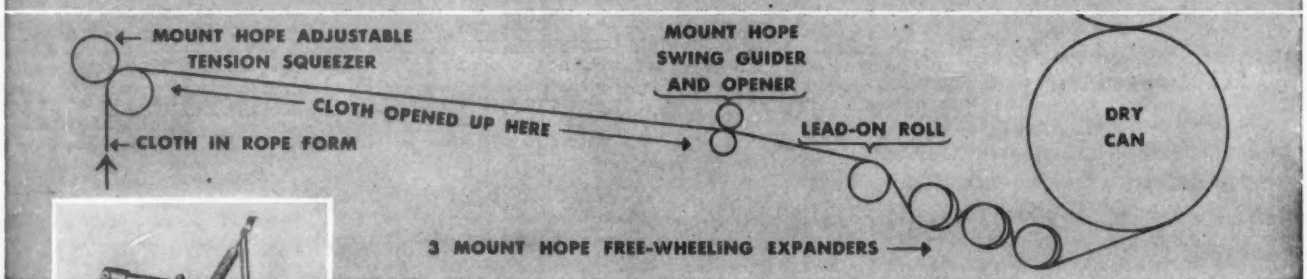
Unit Costs Are Still Above Consumer Aims

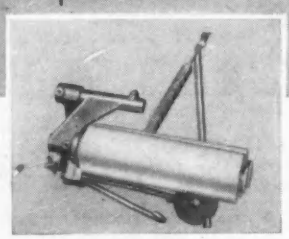
Knitwear and many other manufacturers since midyear 1948 have done what they could to reduce their costs, but last fall it was demonstrated repeatedly that the going value (per unit) of manufactured goods seems to be above the average consumer's ability to buy. Some observers contend that the economic position of the consumer may deteriorate somewhat further during the next few months.

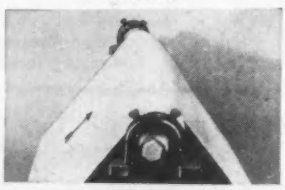
During summer and fall 1948 employment was slightly spotty in the "soft" lines, but remained well sustained in the durable field. More recently, numerous producers have had to reduce operations to three or four days per week in the lines making capital goods. While new wage upturns may not amount to much, further gains may occur. Living costs by this spring may still be high enough to encourage an all-out "Fourth Round" of union wage demands.

Notwithstanding that consumer spending may remain as irregular as it has been since the election, manufacturers' and distributors' inventories may rise again during the winter months, to anticipate the chances of a new increase in labor outlay. Meanwhile, it is pointed out, consumer spending seems likely to remain on a very uneven basis.

GETTING MAXIMUM WIDTH on Rayon Marquisettes
As Practiced by a Well Known Finisher


MOUNT HOPE ADJUSTABLE TENSION SQUEEZER
MOUNT HOPE SWING GUIDER AND OPENER
CLOTH OPENED UP HERE
CLOTH IN ROPE FORM
LEAD-ON ROLL
DRY CAN
3 MOUNT HOPE FREE-WHEELING EXPANDERS


GUIDERS


EXPANDERS

WHAT THIS FINISHER SAYS ABOUT:—

SWING GUIDERS AND OPENERS— Saving in labor; handle goods safely, easily adjusted, quiet.

FREE-WHEELING EXPANDERS — Easy to keep clean; give maximum stretch with minimum warp tension; eliminate creases and wrinkles; handle goods safely.

Tell us your cloth opening, guiding, or cross-stretch problem and let us make recommendations free of charge.

MOUNT HOPE MACHINERY COMPANY
42 Adams St., Taunton, Mass.

Representatives—Parkman Collins Company, Boston—for Maine • Ingalls Engineering Company, Providence—for N. H., Mass., R. I., and Conn. • John H. Andresen, Inc., Paterson—for Southern N. Y., N. J. and Pa. • Slaughter Machinery Company, Charlotte—for the South • S. S. Wilson, 1737 Howard Street, Chicago—for Mid-West • Sidney Springer, Los Angeles—for California • W. J. Westaway, Limited, Hamilton and Montreal—for Canada.

Mount Hope CLOTH HANDLING DEVICES

When a Mill takes Pride

in its knitting, consumers take pride in *wearing* the merchandise it produces. That's how sales promote sales and reputations are made. But good knitting always depends on good needles. Whatever type of knitting you do, rely on Torrington Needles—the precision-made quality needles that come in the famous Red and Green Box.

THE TORRINGTON COMPANY
TORRINGTON, CONN., U. S. A.
Established 1866

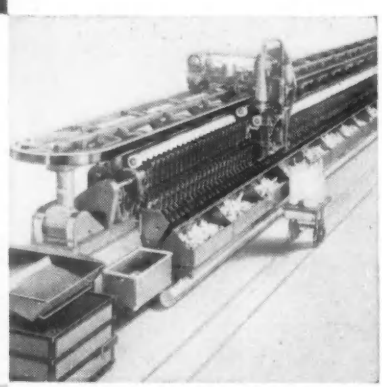
Branches: New York • Philadelphia • Chicago
Greensboro, N. C. • Boston • St. Louis • Toronto, Canada
Pacific Coast Representative: E. G. Paules, 1762 West Vernon Ave.,
Los Angeles 37, California. In England: Broadgate House,
7-10 Eldon Street, London E. C. 2.

There's a **TORRINGTON** Needle for every type of Knitting!

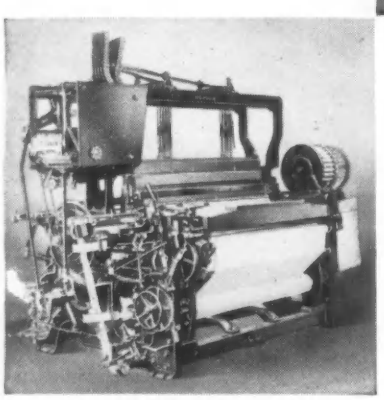
Torrington Needle Bearings help

Spin Finer - Spool Faster - Weave Better

Saco-Lowell Shops have consistently improved roving and spinning frames to make finer quality yarn. Important mechanical advances include Torrington Needle Bearing Top Rolls and Spindles. In top rolls, smoother operation and greater stability have increased uniformity of production. In spindles, Needle Bearings have helped to extend tape life and reduce oil contamination.



Barber-Colman Automatic Spoolers operate at speeds from 900 to 1200 rpm. Under these high-speed winding conditions, Needle Bearings reduce tension-building "drag," precision-stealing wear. In a compact cheese arm design, one of many applications, Needle Bearings provide the high capacity to handle heavy cheeses . . . the smooth operation needed for low uniform tension.



Draper Model XD and Model XP High-Speed Looms depend for exact tension control—vital factor in fabric quality—upon such refinements as Needle Bearings in whip roll cam followers. In ten years of service, Needle Bearings have made an enviable record. Operating at 500 to 600 rpm, they have sustained precise action, eliminating the former need for frequent replacement of worn cam follower parts.

TORRINGTON NEEDLE BEARINGS can make many textile operations more precise, smoother and more economical . . . with no major design changes in equipment.

You can reduce vibration and "lost motion" due to wear: Needle Bearings have close internal clearance and unusually long life. You can increase speeds and handle resulting loads: Needle Bearings have the speed range and capacity needed. You can simplify lubrication and cleanliness problems: Needle Bearings retain lubricant effectively and limit oil consumption.

And Needle Bearings take up little space, simplify designs, speed fabrication and assembly. Work with our engineers on details—small details that can improve operation of your equipment . . . economically. Write us today.

THE TORRINGTON COMPANY
Torrington, Conn. South Bend 21, Ind.
District Offices and Distributors in Principal Cities

TORRINGTON *NEEDLE* **BEARINGS**

Needle • Spherical Roller • Tapered Roller • Straight Roller • Ball • Needle Rollers

War Economy Outlook Stressed by Leaders

While disclaiming any attempt by the military authorities to influence their opinions, some of the leaders in the knitwear express the view that, whereas we may be closely approaching a virtual wartime economic set-up in this country, the large majority of producers and distributors persist in applying peacetime thinking to their operations. This raises the question of actually how far the knitwear industry is prepared, at this writing, for an accelerated movement toward military sufficiency.

It also raises the question in the minds of many knitters as to how valid the so-called Communist threat may be, insofar as relatively little action followed the President's appeal for support of a new defense program as issued early last spring. As previously noted, the procurement officers stepped up their buying during the summer and fall, but not nearly enough to seriously affect total production of knitted items. More recently a new element has been introduced, the leaders remark, which is supposed to use our taxpayers' money to "bolster" the military systems of Western Europe and some Asiatic countries.

Outstanding leaders, whose opinions usually are well received, contend this country is gradually slipping into a real wartime economy, implying that eventually we shall have another dose of material and merchandise shortages, rationing, and other government controls. This type of thinking has reached the stage where citizens are advised to purchase extra supplies of underwear, etc., to provide against a time of acute scarcity of such items in the future. So far, such pleas seem to have fallen on deaf ears, as far as the public is concerned.

It seems to be generally understood among the people that at present there is ample supply of whatever merchandise they may need and at prices which they can influence to their advantage by deferring purchases. Accordingly, predictions of war-time conditions have fallen flat all along the line.

SURFACE RACEWAYS DO DOUBLE DUTY IN HOLEPROOF PLANT

Photo courtesy, National Electric Products Corp.

A network of surface raceways suspended from roof trusses are serving double duty in the new finishing plant of Holeproof Hosiery Co., Marietta, Ga.

When the plant was designed, it was desired to incorporate a lighting system whereby fluorescent lighting fixture locations could be occasionally changed without extensive cost of construction. This was in order to be able to move work tables and lighting fixtures to meet radical changes in production schedules.

Special hangers were mounted on the raceway to receive the chain hooks from the lighting fixtures. Through and in the raceway were placed the necessary wiring and duplex outlet receptacles. Thus one raceway not only protects and distributes electrical conductors, but also serves as a fixture hanger.

Knitwear Buyers Differ As To Spring Orders

Entering December, a number of knitwear interests, alarmed at unusual delay in contracting ahead for merchandise, made a survey of wholesalers and the retail trade and reached no decisive conclusion. As to whether the distributors planned to operate normally in underwear, hosiery, knitted sportswear and outerwear, in each division the answers were 50-50.

At the time this survey was made, some sources had withheld their spring lines. Since then, these offerings have come out and it is possible that certain buyers may have changed their minds. However, such a development, even if continued, is not thought to make much change in the decision to operate cautiously for spring.

At this writing most retailers (especially those handling large volume) remain conservative. Wholesale houses, queried as to what they believed the retailers would do, confirmed this opinion. The wholesalers conceded that later on this conservatism may give way to more confident buying for spring.

As to inventories, in the knitwear field the wholesalers are said to regard them as normal for this season of the year, but this appraisal also is subject to change. Some of the middlemen in this field said they had worked down their stocks to below normal and intended to hold them at this level until the retailers had a change of outlook. It was indicated, however, that branded lines would be bought earlier than the unbranded.

The foregoing follows rather closely the customary trend in retailing in the general merchandise categories at this season of the year.

Are you competitive price wise?
Are you ready for a buyer's market?
Are you satisfied with your quality?

As Production Engineers we specialize in the utilization of

LABOR — EQUIPMENT — MATERIAL

Ask for our list of satisfied clients—It reads like the Blue Book of American Manufacture.

Our work covers millions of spindles and years of experience.

AMERICAN ASSOCIATED CONSULTANTS, Inc.

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J. J. SKELLY, Vice Pres. and Gen. Mgr.
250 PARK AVENUE
NEW YORK 17, N. Y.

GRANT BUILDING
PITTSBURGH, PA.

H. B. CRAFT, Vice President
in Charge of Southern Operations
30 CAMDEN ROAD
ATLANTA, GA.

Cord Check for Draper Looms

EDITOR TEXTILE INDUSTRIES:

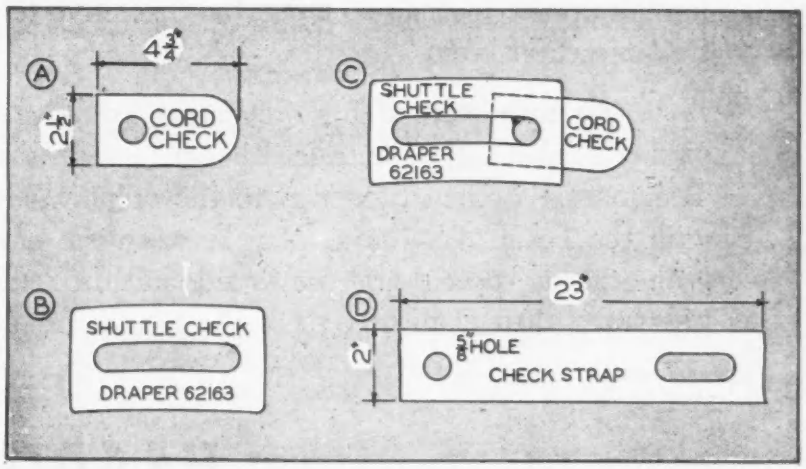
All of our high speed looms are now equipped with a device which has proved by test that it will reduce shuttle rebound and save check straps. Our looms are Draper X2, 50-inch models that operate at 182 picks per minute.

The device, which I have named "cord check," consists of a piece of five ply cord rubber 4¾ inches long and 2 inches wide. It costs 28 cents and will run approximately 8000 loom hours before needing replacement.

We have been running our looms with this device for the past two years, and it has shown considerable savings on check straps alone.

The accompanying sketches show the parts used for the cord check.

CONTRIBUTOR No. 8112



The cord check is made as shown at A. For best results use rubber 5/16-inch thick for the cord check. Shuttle check (Draper No. 62163), as shown at B is used, and the shuttle check and cord check are shown in relative position at C. The cord check bends when the picker stick hits the back of the check strap, thereby acting as a recoil. The check returns to normal position when the picker stick goes forward. The cord check fits between the shuttle check and the check strap. A check strap similar to the one shown at D is used with the cord check and shuttle check arrangement.

Fire Prevention in Textile Mills

EDITOR TEXTILE INDUSTRIES:

We have noticed that in reports of discussion meetings there have been comments on opener room and picker room practices, and in some instances there was brief discussion on opener and picker room fires. We should like to see discussion in the HOW OTHER MEN MANAGE department on causes and methods of reducing fires in these departments.

CONTRIBUTOR No. 8136

(Note: Back issues of this magazine have carried lengthy articles on this subject. More recently the subject was discussed by R. G. Shepherd before the A.S.M.E. An abstract of Mr. Shepherd's address is given herewith.—Eds.)

HIGH flammability of raw materials, foreign contamination, ever present lint accumulation, high machine speeds, vibration, and some hazardous chemicals, all tend to make textile plants vulnerable to serious fires which may easily develop from a slight spark or hot-spot. Although there are many causes of fires in textile processing, over 90 per cent of them are traceable to three main factors. These are: (1) foreign substance in stock, (2) friction, and (3) failure of electrical equipment. Spontaneous ignition is prevalent as a cause of fires in drying, finishing, and storage of oily mill waste (floor sweeps).

Foreign Matter in Stock. Foreign materials in preparatory process of opening, cleaning, and picking may even carry through to carding. It is not only a common source of fire, but also causes appreciable mechanical damage to machinery. Most of the pieces are ferrous metal, and they may be effectively extracted by approved magnetic separator installations. Magnetic separators should always be installed ahead of the first fast-moving machine, preferably between blending feeders and the next opening machine. Simply installing a magnet in the most convenient place usually leads to inefficient performance. They should be inspected frequently for performance and removal of accu-

SLASHING HINTS

No. 3 of a series

SECTION BEAM TENSION

When the section beams are placed in the creel, the journals must be tight enough to hold them in place, properly aligned with the other beams. Unless the creel is equipped with special bearings, it is possible to tighten up the journals so much that excessive tension is put on that particular section beam.

A very simple method for preventing excessive tightening is to place a washer of about 2½" outside diameter on the shaft of the section beam. The journal is then tightened to the point where the washer just turns with the beam. Too much play between the journal and the beam head is thus easily spotted and prevented, and the tendency toward too much tightening then eliminated.

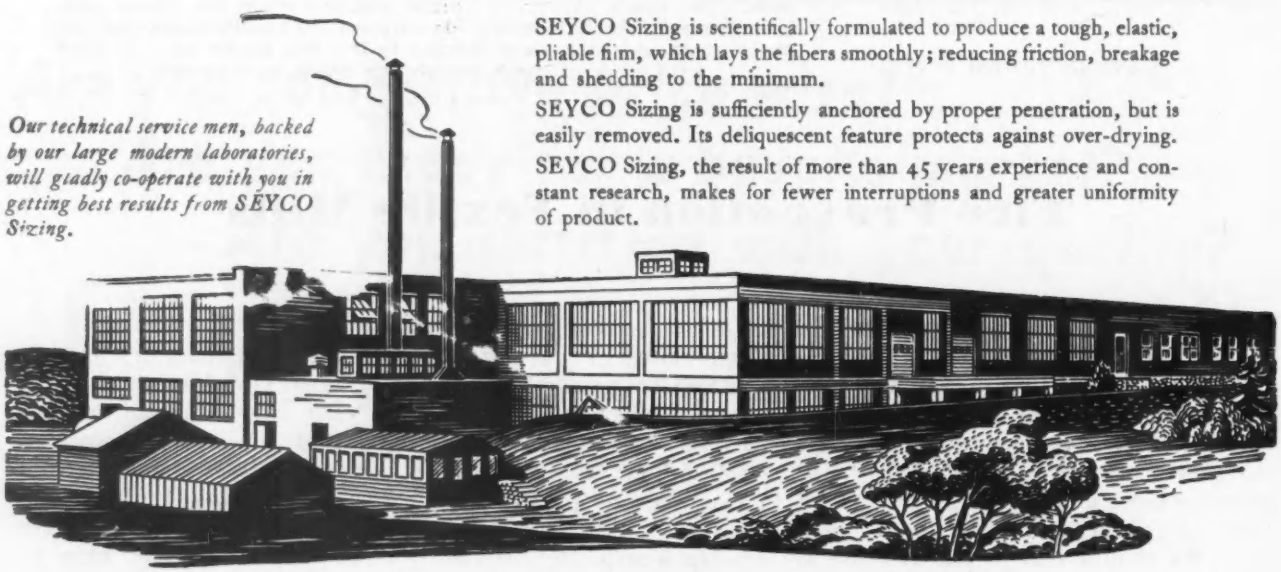
HEADQUARTERS FOR SIZE

Our technical service men, backed by our large modern laboratories, will gladly co-operate with you in getting best results from SEYCO Sizing.

SEYCO Sizing is scientifically formulated to produce a tough, elastic, pliable film, which lays the fibers smoothly; reducing friction, breakage and shedding to the minimum.

SEYCO Sizing is sufficiently anchored by proper penetration, but is easily removed. Its deliquescent feature protects against over-drying.

SEYCO Sizing, the result of more than 45 years experience and constant research, makes for fewer interruptions and greater uniformity of product.



SEYDEL-WOOLLEY & CO.

TEXTILE CHEMICALS

748 RICE STREET • ATLANTA, GA.

SEYCO

PENETRANTS • SIZING • SHUTTLE DRESSING • SOFTENERS • ALKALIS • TWIST SETTER MACHINES •

mulated metal.

Extracting foreign material from hard waste is more difficult than from loose fiber. Numerous fires originating in this process call for reclaiming such waste by garnetting, in a cut-off area or room, with hand-feeding of processed waste to the main opener or picker line.

Friction. There are three types of friction that cause fires which are commonly encountered in textile mills. They are: (a) improper lubrication, (b) fiber chokes around shafting or bearings, and (c) loose or improperly adjusted machine parts causing metal-to-metal contact.

The increasing use of ball and roller bearings is proving to be one of the greatest advancements in reducing textile machine fires attributed to friction.

Lubrication. Reputable lubricant suppliers furnish engineering service which is available upon request. Annual lubrication surveys with frequent check-ups have proved worthwhile. A recent survey of southern mills showed approximately 40 per cent had never made use of this service. These mills consistently report more fires.

Fiber Chokes. Fiber chokes are common with older type preparatory machines, mechanical conveyors, and condensers having plain unguarded bearings, particularly if twisted stock is not thoroughly broken up. Anti-friction bearings help materially but there is still room for improving the design of some bearings to avoid this fault.

Loose Parts. Friction from loose and improperly adjusted machine parts is of course a mill responsibility of inspection and maintenance, with the accent on regular and frequent inspections, more particularly in departments such as weaving, where this fire cause predominates.

Electrical Equipment. The electrical fire hazard will be reduced by providing the proper type of wiring and equipment, and by regular inspection and maintenance of all electrical equipment, especially in those places where vibration is severe. Motor terminals and connections to motor controllers are particularly susceptible to vibration. The use of multiple conductor flexible cord such as the National Electrical Code, Type SO, having a tough synthetic rubber outer jacket which is both oil and moisture resistant, is recommended.

Secure and vibration resistant connectors such as T & B "Watertight Connector" should be used for fastening the flexible cord to the switch enclosures or the motor terminal box. Semi dust-tight enclosures (NEMA Type 1-A) should be provided for switches, motor controllers and fuses in those areas where lint conditions are severe.

Dust-tight covers or globes should be provided on all lighting fixtures where there is danger of ignition by lint accumulating on the lamps or in the fixtures or from sparks from broken lamps or hot filaments dropping onto stock. Lamps on drop cords should not be used, and hanging fixtures should be suspended by stems of threaded rigid conduit.

Extension lamps should be equipped with vapor-proof type globes and substantial guards, and the attachment plugs and receptacles should be of the type wherein the arc is confined and extinguished within a chamber in the device before it can be completely disconnected.

Motors or generators in dusty or linty areas should be of the totally enclosed unventilated or totally enclosed pipe ventilated types, except that standard self-cleaning textile motors of the squirrel cage type may be used in those areas where only moderate accumulations of lint and flyings are likely to collect on or in the machine.

All electric wiring should be either in rigid steel conduit or electric metallic tubing. For personal safety it is important that all motor frames or metal enclosures and conduit be adequately grounded in conformity with the National Electrical Code rules.

Materials Handling. Hazardous conditions in preparatory mill departments, such as opening, picking, waste recovery, carding or roving may be minimized to a large extent by proper machine and stock separation. It is essential to have sufficient area to maintain adequate aisles between machinery and stock, in addition to subdividing bales, laps or roving into reasonably small lots.

Opened bales should be divided into lots of not over six bales, providing clear aisles of at least six feet, with five-foot aisles between bales and machinery. Where the entire picker equipment is fed by a single conveyor, fire usually involves the whole system and may seriously interrupt plant production. Large picker lines should be separated into units of not over four pickers to a group.

Present economic conditions have resulted in an increasing use of labor saving equipment such as gasoline powered tractors, electrically operated conveyors, high intensity radiant heat dryers, air conditioning systems, etc. All of these involve potential fire hazards.

It is suggested that plans of new processes and equipment be reviewed by the insurance company for fire safety before installation.

THE WINNER!!!

Harold R. Treiber of California, Mo., was the winner of the $100 award for entry submitted in the "kink" contest ending Nov. 15, 1948. Mr. Treiber's suggestion will appear in an early issue of "Textile Industries."

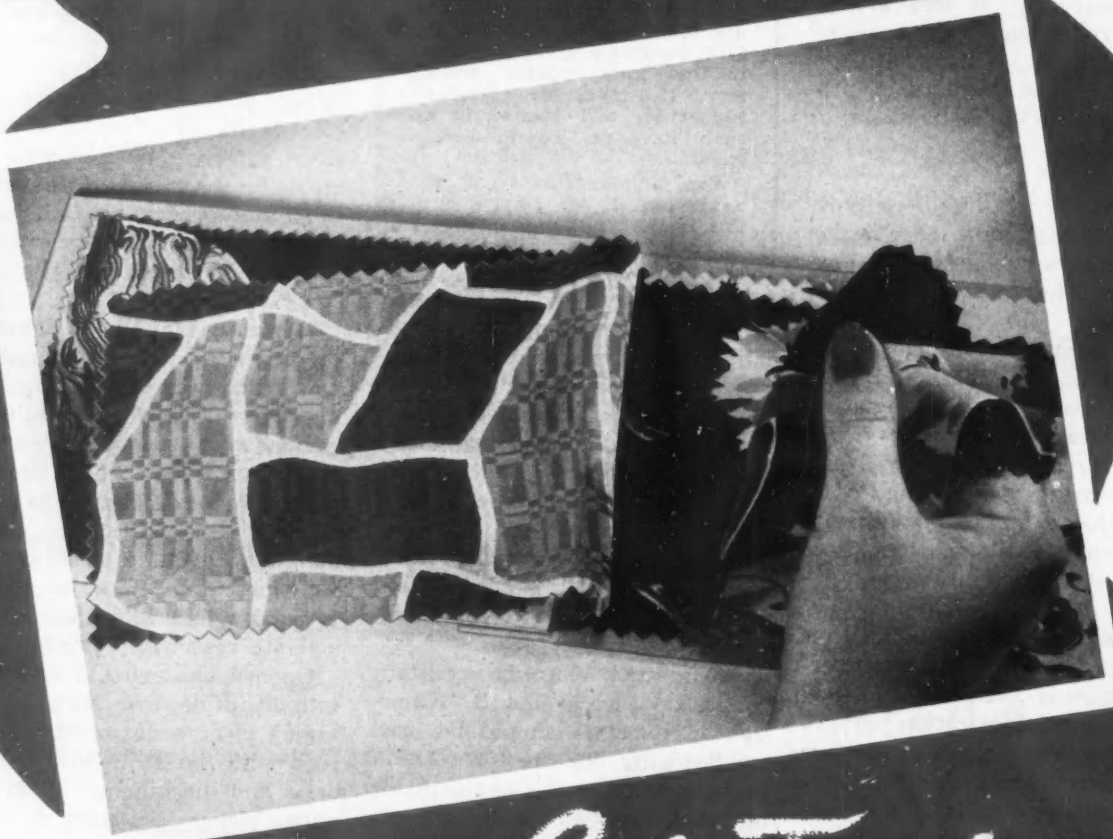
For announcement of the next contest, see page 165 of this issue.

Predicting Loom Stops

EDITOR TEXTILE INDUSTRIES:

We are anxious to learn if there has been any work done toward establishing, from style characteristics and cloth construction, the number and type of end breakages

AHCOVELS*



THEY GIVE RESIN FINISHES THE *Soft Touch*

The Ahcovels have a great variety of uses on all types of fibres and fabrics, both as self finishing agents and with gums, starches and various resins. However, one of their most important applications at present is with thermosetting type resins, on rayon and rayon blends, to eliminate harshness, improve drapability and impart a soft, lustrous velvety hand.

Made in five different types, both cationic and anionic, each Ahcovel has special characteristics which make a fabric more salable. For instance, certain Ahcovels positively will NOT alter shades or the light fastness properties of colors. Others have extra penetrating power and are particularly suitable for high twist fabrics, such as crepes. One type is extremely effective in producing body and heat resistance. All Ahcovels are substantive.

No special equipment is required to apply the Ahcovels and quantities required are a 1½% to 2% solution, or 1% to 2% on the weight of the goods.

Tell us your softening problem. Probably one of the Ahcovels will solve it.

TYPICAL APPLICATIONS

Sheetings • chambrays • chenilles • yarns in package form • broad cloths • spun rayons novelty fabrics • taffetas • crepes • napped goods • knitted fabrics (circular and tricot) nylon hosiery (with resin finishes).

*Trade mark reg. patented

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that may be expected in weaving cotton goods. In other words we should like to obtain some information relative to establishing a table or curve that would permit the prediction of loom stoppages from know data of style of goods, loom speeds, etc.

We should greatly appreciate any information your readers may be able to furnish.

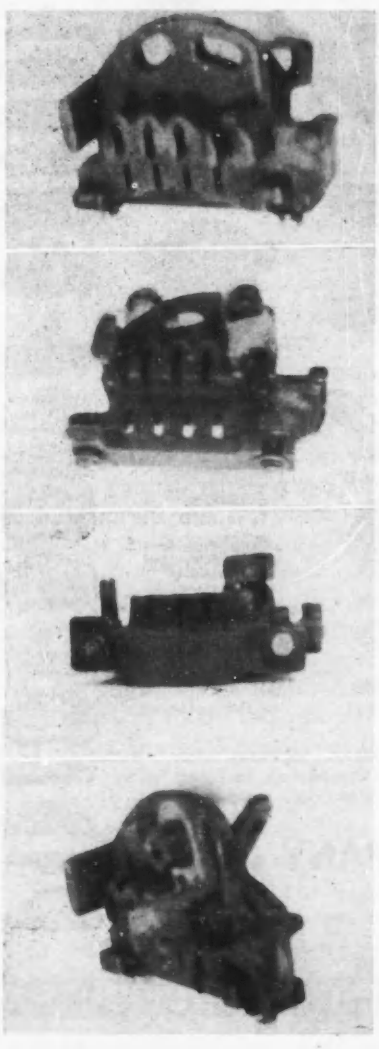
CONTRIBUTOR No. 8132
(Canada)

Repair Cuts Cost on Stop Motions

EDITOR TEXTILE INDUSTRIES:

In an effort to reduce the loss of production and high cost of repairing a small item, we have made a small casting which can be attached to the stop motion stand to hold the back rod in the correct position. The casting is inexpensive, and it can be installed while the loom is in operation.

These four views of the stop motion stand show where the casting should be installed.



Another saving is made by using the same rod. The rod wears on the ends as it wears the stands. The repair casting fits outside of the old stand slot and holds the rod where it is not worn.

We have saved a considerable sum of money by making and using these castings to prevent having to remove and repair all of our worn stands. The accompanying illustrations show the location and appearance of the casting.

After many hours of continuous operation, the back separator rod on Model E Draper looms wears through the stand, thereby leaving the rod with no support. Usually, it is necessary to remove both sides of the stand to make the repair.

Both sides of the stop motion must be removed because they are firmly riveted together at the front with a girt. When these stands are removed, the slide bar stop motion must be disconnected. After the repair is made, it is necessary to replace and adjust the slide bar stop motion. The loom must be out of production while the repair is being made, and the work places an extra load on the loom fixer.

Although the repair is a small one, it is an expensive operation that must be performed. The rod must be at the correct height to prevent the warp from becoming slack, thereby allowing the drop wires to fall and stop the loom.

CONTRIBUTOR No. 8091

Handy Holder for Lease Bars

This item was submitted in a "kink" contest.

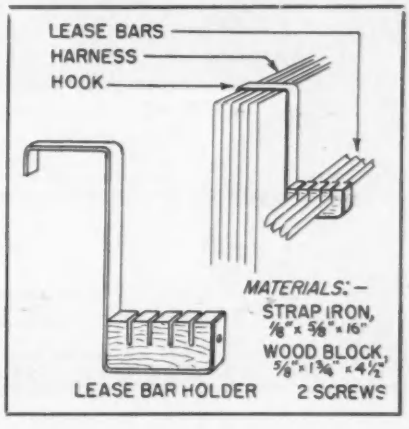
EDITOR TEXTILE INDUSTRIES:

When a new warp is tied-in on a loom it is usually necessary to pull about 12 inches of yarn through the harness, reed, and drop wires. To hold the drop wires firmly and in the best position while this yarn is being pulled through and tied, two hooks can be used to hold the ends of the lease-out bars.

These holders consist of a hook which fits over the top of the harnesses and a hook in the other end on a level with the heddle eyes. Fitted in this lower hook is a block of wood with slots sawed in it to hold the lease bars.

The pattern is placed on the harness straps, a lease bar holder is hooked to each end of the harnesses, and the ends of the lease bars holding the drop wires are placed in the slots of the holders. The yarn is then pulled through and tied. The lease bars are removed from the holders, pulled back in normal position and pulled

This sketch shows the details of the lease bar holder and the way it is attached to the harness frames.



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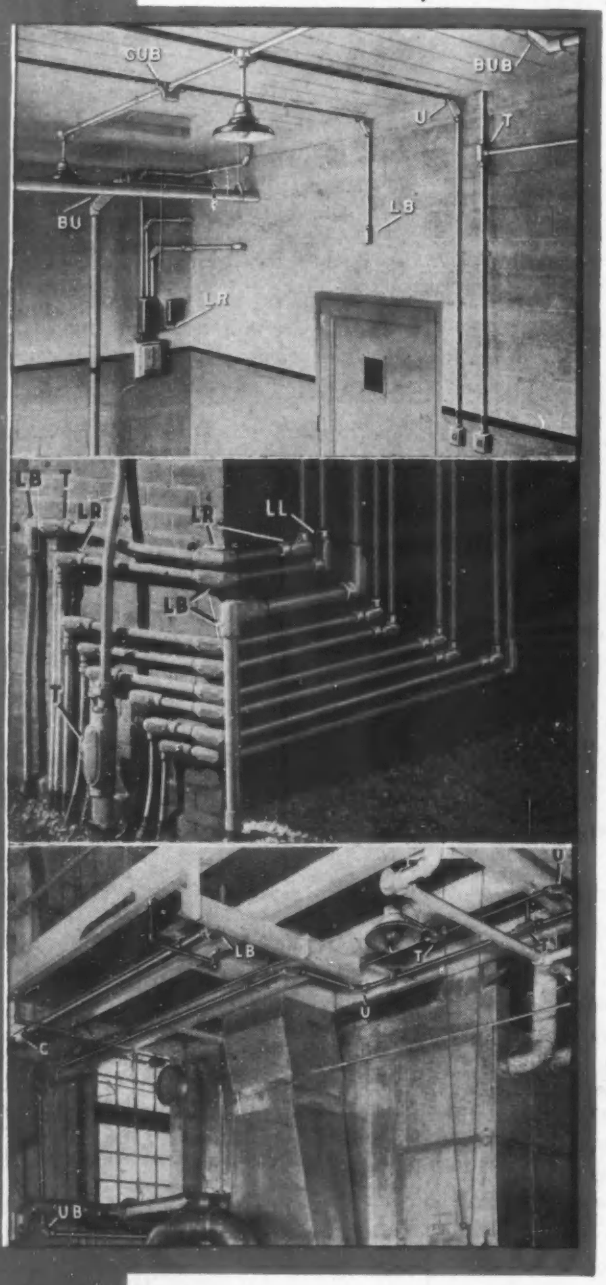

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from the drop wires after the feeler bars have been inserted.

The accompanying illustration shows how the lease bar holder is made and how it is attached to the harnesses. CONTRIBUTOR No. 8129

Discussion on Chalk Marks

Question Briefed: *We have had complaints regarding the crayons or chalk which we use to identify various counts and twists of yarn at our mill. It is said that this does not scour out in the finishing processes, so that frequently it shows up in the finished fabrics, especially when dyed lighter shades.* (CONTRIBUTOR No. 7976, *October*, 1947.)

EDITOR TEXTILE INDUSTRIES:

Chalk used to identify different counts and twists must come out during normal finishing operations, since there is no special process designed to remove it in the finishing of piece goods. Scouring or washing during the regular finishing operations will remove a properly selected chalk.

Two ingredients may be present, either one of which may cause trouble. These are fast dye and/or paraffin. Chalk containing fast dye obviously should not be used because it will not come out easily. The coloring should be done with fugitive colors which will come out during scouring. Paraffin or oil base colors will cause trouble if they are unsaponifiable or unemulsifiable. This would cause resist spots which would not be confined to light shades, but would be likely to show up on any dyed goods. Trouble of this kind would be expected if the wax crayons commonly used by children in coloring books are used to mark different counts and twists.

The most satisfactory chalk, and also the cheapest, would contain only water soluble or water dispersable materials. Soap is added to some chalk during manufacture to assist in its removal. Markings from this kind of chalk will not cause trouble in finishing plants, in fact it will be largely removed in the mill by dusting during subsequent operations.

Other troubles may cause what is erroneously thought to be markings from the wrong kind of chalk or crayon. Paint has been known to cause spots on yarn. This can occur while painting is done in the mill, from new machinery, or from other freshly painted surfaces. It is desirable to make a thorough investigation of other possible sources of trouble when complaints of this type are received.

CONTRIBUTOR No. 8135

Wages Lost Through Absenteeism

The $995.00 loss in wages is for bedspread mill employees only for the week ending December 21. The bulletin board received a lot of attention as it passed through the various departments in the mill.

THE BULLETIN board in one mill is reported receiving a lot of attention since management decided to show the operatives how much money they lost through absenteeism. The display is shown in the accompanying illustration. The figure is obtained by multiplying the hours lost by absentees by the average hourly rate for the bedspread mill.

The display consists of a piece of 3/4-inch plywood, three by five feet, upon which is mounted a drawing of a paycheck. The amount of money is shown in red and the week ending in black.

The board was sent to each department in the bedspread mill for a week showing the loss in earnings for a recent pay period. The idea was originated by a personnel manager.

Temporary Rack For Roll Material

EDITOR TEXTILE INDUSTRIES:

A temporary rack for accommodating rolls of material can be made to fit on a four-wheel truck. This rack can be removed from the truck when it is not needed so the truck can be used for other purposes.

In our shop such a rack was made from 1½-inch pipe. Although the rack can be made to any length desired, the width

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Hundreds of leading spinning mill superintendents today rate Jenkin's Dynamically Balanced Cylinders as a major means of keeping production costs under control. By replacing crooked and unbalanced cylinders with "proved performers," you eliminate excessive vibration, keep your yarn quality constant, and minimize replacement costs.

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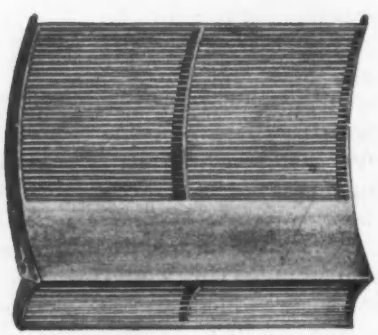

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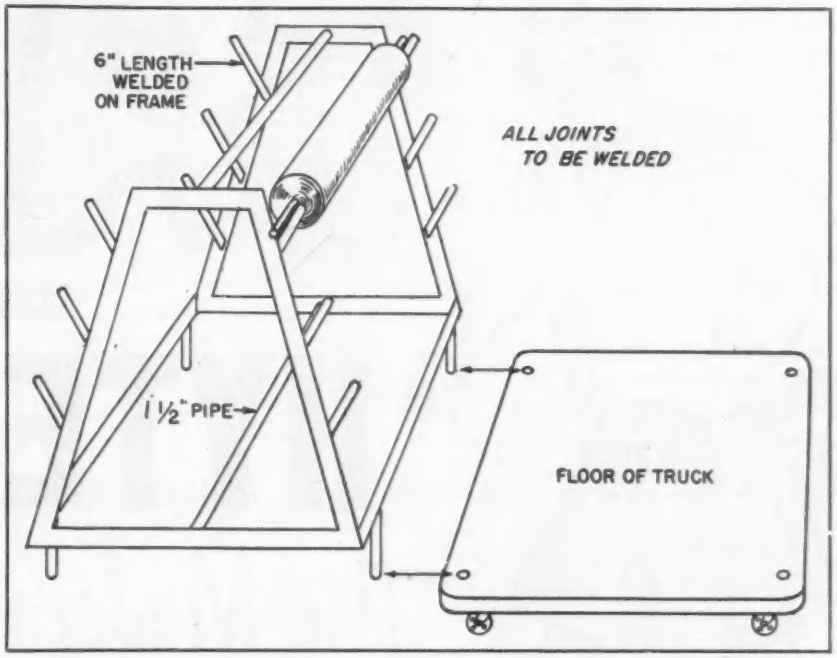
should be confined to the holes located in the four corners of the truck. The carrier should be approximately 4½ feet high. The legs that fit into the holes in the truck also serve as supports for the rack when it is removed from the truck and placed on the floor or in storage. A small crane or hoist can serve to lift the loaded rack from the truck to place it in storage.

The material stored on the racks can be moved to any place in the plant, and many different sizes of rolls can be placed on the carrier. To store material on the carrier, a pipe or pin should be inserted through the center of the roll, and the pipe is suspended on the clips or supports which have been welded onto the frame. Some of the details of the rack are shown in the accompanying sketch.

There should be enough odd material in the mill shop to build the rack at a negligible cost.

CONTRIBUTOR No. 8128



As shown in this sketch, a temporary rack for roll material can be placed on a flat bed truck for moving, or it can be removed for temporary storage.

More Discussion on Damaged Card Clothing

Question Briefed: *We are having difficulty with the card clothing jamming, flying-up (buckling), having slack places, and getting mashed. Our cards are equipped with continuous strippers. Other details are: Cylinder wire* 90, *doffer and flats* 100, 15-*oz. lap,* 65-*grain sliver, carding* 11 *pounds per hour. Cylinder speed is* 165 *rpm.* (CONTRIBUTOR No. 7866, *August* 1947.)

EDITOR TEXTILE INDUSTRIES:

Referring to the discussion on card clothing appearing in the May 1948 issue of Textile Industries, I recall having had similar troubles with cards, although they were not equipped with continuous strippers. I am pleased to relate my experience in an effort to help CONTRIBUTOR No. 7866.

I found that the bearings on each end of the feed rolls were solid sleeve bearings with a small oil hole in the center of each one. About two drops of oil was all these holes would take without running over. The bearings were about three inches long. The feed roll ran so slow that the supply of oil was not sufficient to lubricate the full length of the neck of the roll. After a while the oil became gummy and the bearing became dry at the ends of the roll necks. They became worn and the

$100 for Best Kink or Short Cut

(Ends March 15, 1949)

ONE HUNDRED dollars will be awarded the contributor who furnishes the most helpful short cut, kink, time-saving device, cost-cutting suggestion, or quality improvement idea by March 15. The contest may be entered by any reader of this magazine, but the kink must not have been published elsewhere.

In sending in ideas, give complete description and where possible accompany description by sketch. Finished drawings are unnecessary. Participants are not restricted as to number of kinks submitted for consideration.

Only one award will be made, but non-winning contributions will be paid for at regular rates if used. Advise in original correspondence if participant's name may be used, or if contributor number is preferred.

All entries must be postmarked not later than midnight of March 15, 1949. Address: Editor "Textile Industries," 806 Peachtree Street, N. E., Atlanta 5, Georgia.

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In the textile industry, HYTERGEN often replaces soap entirely in the ratio of 1 pound of HYTERGEN to 2 to 5 pounds of soap. It has a much wider range of application than any soap because its efficiency is not hampered or impaired by hard water or acid conditions. If you are not entirely satisfied with your present soaping, scouring, washing, wetting-out or boiling off of all types of fabrics you should investigate the use of HYTERGEN – the *economical* synthetic organic detergent.

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1 Possesses exceptional scouring action.
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6 Dissolves readily in water.
7 When used with soap, Hytergen prevents formation of insoluble lime soap curds.
8 Can be used on the most delicate fabrics and colors to good advantage.
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weights that hold the roller down on the stock being fed into the card were not sufficient to cause the flutes of the feed rolls to grip the cotton. The licker-in consequently jerked and plucked the cotton into the card in lumps.

I was standing near a card one day when the licker-in jerked in a lump. The coiler head choked the trumpet and the end came down. I examined the sliver and found it contained a heavy bulk of uncarded stock, This trouble was overcome by having the roll necks built up and bushed with the bearings split in half. Larger oil holes were drilled in the top half which rested on the roll neck.

If the oil drains and the frame of the card are not kept wiped clean, it will cause chokes in the ends of cylinder between frame and arch. This will cause the wire and clothing to heat and expand, thereby leading to trouble. The oil drains are back of the pulleys under the main cylinder bearings.

CONTRIBUTOR No. 8125

Untied Jacquard Can Make Dobby Fabric

EDITOR TEXTILE INDUSTRIES:

Mills engaged in the manufacture of decorative and novelty fabrics will at times find it expedient to use special attachments that would not be necessary in larger plants on plain and high-production staple fabrics. There may be times when decorative fabric mills will desire to operate on plains, or simple fancies, and they may not have any dobby looms available. In such a case, if Jacquard looms with worn-out or obsolete ties, or new looms not yet tied up are available, the Jacquard head can be easily rigged up and used in place of a dobby.

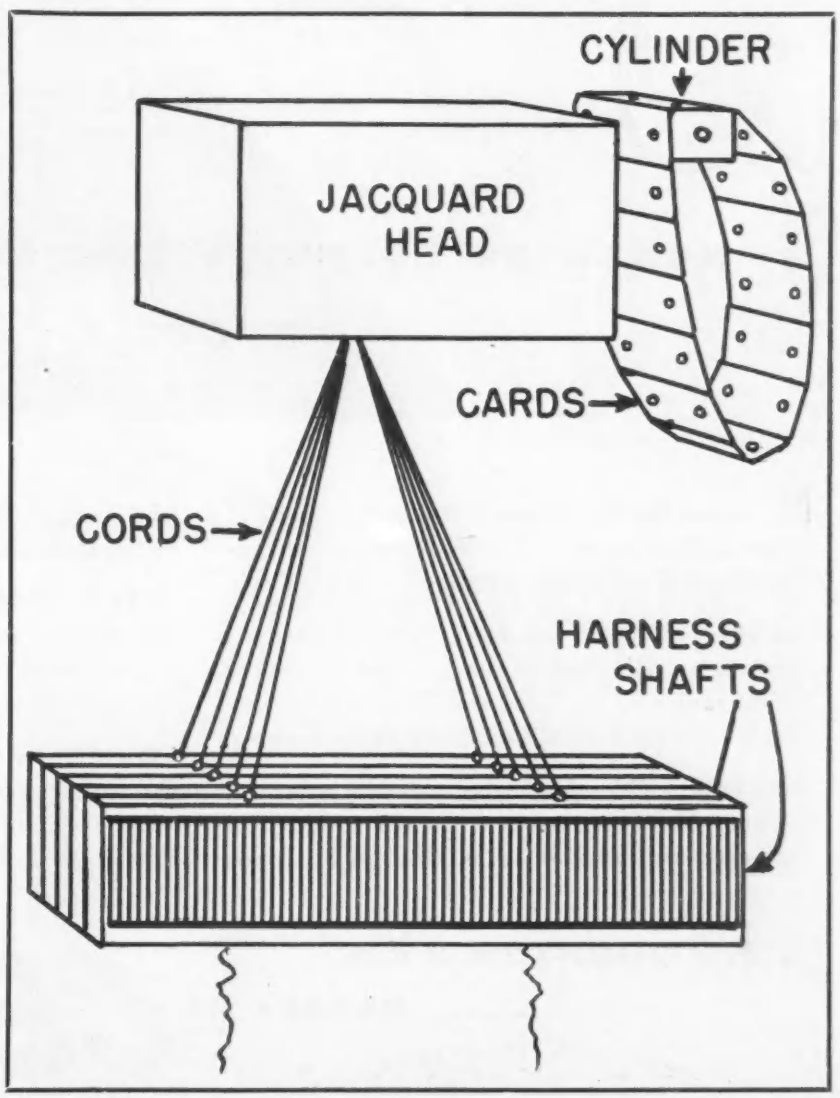
Any old ties, harness, comberboard, etc., should be completely removed. Regular dobby shafts to fit the loom should be obtained. Depending on the drawing-in draft, the Jacquard will have at least one, and preferably two hooks tied up for each shaft.

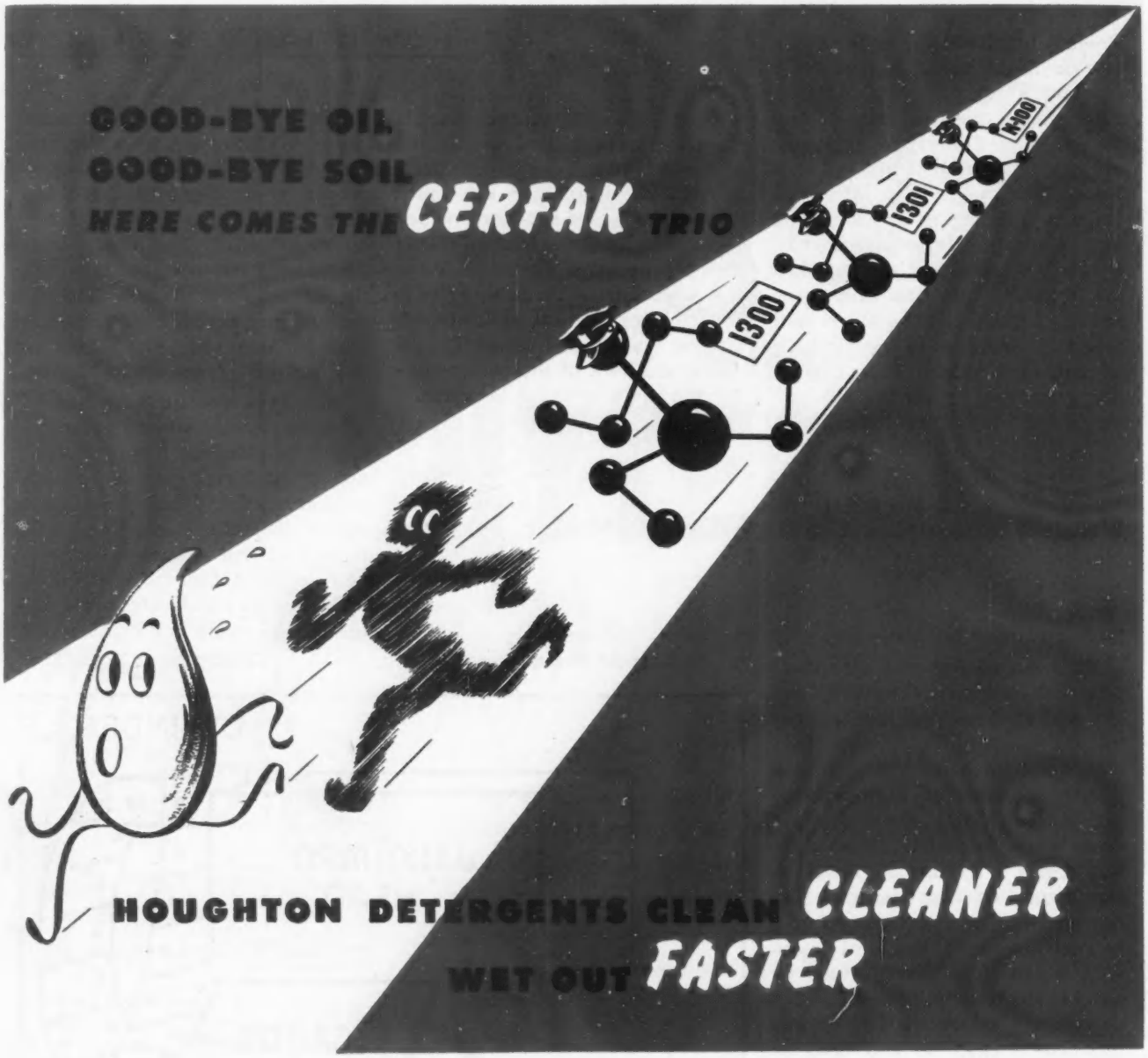
The harness shafts are mounted in the loom in much the same manner as on a regular dobby, and the rigging to the Jacquard hooks can be easily adapted to the particular requirements. The best method would be to use the required number of hooks on the center rows of the Jacquard. This will equalize the strain of lifting the harness shafts.

The drawing-in draft will be exactly the same as for regular dobby work, and the warp is drawn in the harness shafts accordingly. Instead of a dobby chain, Jacquard cards should be cut from the pattern draft, each riser being represented by a hole in the card and each sinker by a blank. If two hooks per shaft are used as suggested, cut two holes or miss two for each riser or sinker. The accompanying sketch shows roughly how the loom should be set up for this method of weaving.

This is a practical method of utilizing looms which otherwise might be standing idle. While it will by no means replace a standard Jacquard or dobby head, it will enable the mill to get production from looms with worn-out ties or new looms not yet tied up until such time as regular Jacquard tie-ups can be made and installed.

CONTRIBUTOR No. 8127





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CERFAK N-100—A concentrated detergent especially good for scouring in solutions having a pH above 7, and with any type of alkali. Replaces soap on a better money-value basis.

One of these will meet your scouring needs. All are backed by our personalized mill service. Ask the Houghton Man, or write us at Charlotte 1, N. C., or Philadelphia 33, Pa.

E. F. HOUGHTON & CO.

MAKERS OF **CERFAK**

Natural Business Year

(*Continued from page* 95)

heavy shipments in the spring are not likely to be liquidated until the summer months. They are at their minimum prior to the peak of shipments in the fall.

Current liabilities are customarily at their maximum in the first quarter of the calendar year. Purchases of raw cotton, the principal merchandise bought by cotton weavers, are financed largely by bank loans, with a result that the current debt load consists mainly of notes payable. The debt load is relatively low at the end of September.

From these data, it is evident that either September 30 or August 31 is an acceptable natural year closing date. Since September 31 is the end of a calendar year quarter, closing the accounts on that date permits comparison of financial results with other company data and general business data published quarterly. With stocks low, taking the annual inventory is easier than at any other time during the year.

The August 31 closing date might be more convenient when a company has heavy shipments in October and would not want to tie up stockrooms for inventory-taking at the end of September, or when the company's inventory has dropped to its lowest level by the end of August.

Within any industry some concerns naturally have cycles differing from the average. To determine its correct natural business year, an individual company must survey its own particular operations, using those of the industry as a guide.

How to Adopt the Natural Year. Contrary to an apparently widespread misconception among business men, the government does not require income tax returns to be filed according to the calendar year. Once, in 1909, a federal revenue act did make the calendar year obligatory, but the requirement was removed four years later.

Present laws allow income tax returns to be filed on whatever

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fiscal year a company considers desirable. New companies may, when being formed, adopt their desired natural business year without getting advance permission from federal tax authorities. An established business wishing to change from a non-natural year must apply to the Commissioner of Internal Revenue sixty days before the anticipated new closing date. Requests for changes, when based on sound reasons, are ordinarily granted without further inquiry. A separate federal income tax return must be filed for the interim period between the end of the old non-natural year and the new natural business year.

Permission must also be obtained from state tax authorities in states having corporate income tax laws. A company's attorney and certified public accountant can furnish information on the legal and accounting aspects of natural year adoption.

If the company is subject to the jurisdiction of the Securities and Exchange Commission, an interim financial report must be filed for that body whenever the period between the end of the old and the beginning of the new accounting year is three months or longer.

Cotton Warp Sizing

(*Continued from page* 133)

difficult so to control the system that the maximum benefit is derived from the beam motor.

Direct current is furnished for both motors from a motor-generator set. The speed of the motors is controlled by using a generator whose output voltage is controlled by variation of the generator field strength. As the voltage is lowered, the speed of the direct current motors decreases. Use is made of this to obtain automatic control through moisture meters, as well as to obtain hand-operated speed control, or change from running to creep speeds.

In order to compensate for the variation in beam speed required as the package builds up, the beam motor must also vary in speed while the rest of the slasher runs at constant speed. For a constant tension pull, a constant horsepower input from motor to beam is required. The motor will maintain this if the input current (over that required to maintain motor resistance and friction losses) remains constant. This current is controlled by a regulator known as the "Rototrol" which is driven at constant speed as part of the motor-generator set. Current to the beam motor therefore remains constant, regardless of the variations in voltage from the generator which are required to vary the operating speed of the slasher.

Since the electric motors have very little friction in their bearings, the pull of the yarn might cause the motors to back up when the current is off, leaving a slack sheet, which would result in rolling and tangling. Therefore, the current is never completely off on stopping, but only cut back to a value just below that which would cause the machine to run, and the warp to creep forward.

In addition, on doffing, the beam motor is cut out, so that the tension between delivery roll and beam is relieved.

The rest of the slasher may be geared to the delivery roll, as usual, or the size rolls may be driven by separate motors from the same generator which drives the delivery roll motor, so that variation in speed of the latter will give corresponding variation in the former. In addition, a vernier rheostat control on the size roll motor allows its relative speed to be changed so that a given tension may be maintained between the front and back of the slasher.

The same type of motor may also be used to drive the cylinders, but it has generally been found more practical to put good low-friction bearings on these and allow them to be yarn-driven.

These motors are normally furnished as the totally-enclosed, nonventilated type, to prevent troubles from getting lint or size inside the motors.

(A complete bibliography on the subject of cotton warp sizing will be published in the near future.)

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Brilliant colors . . . fast to light, laundering, chlorine and wear.

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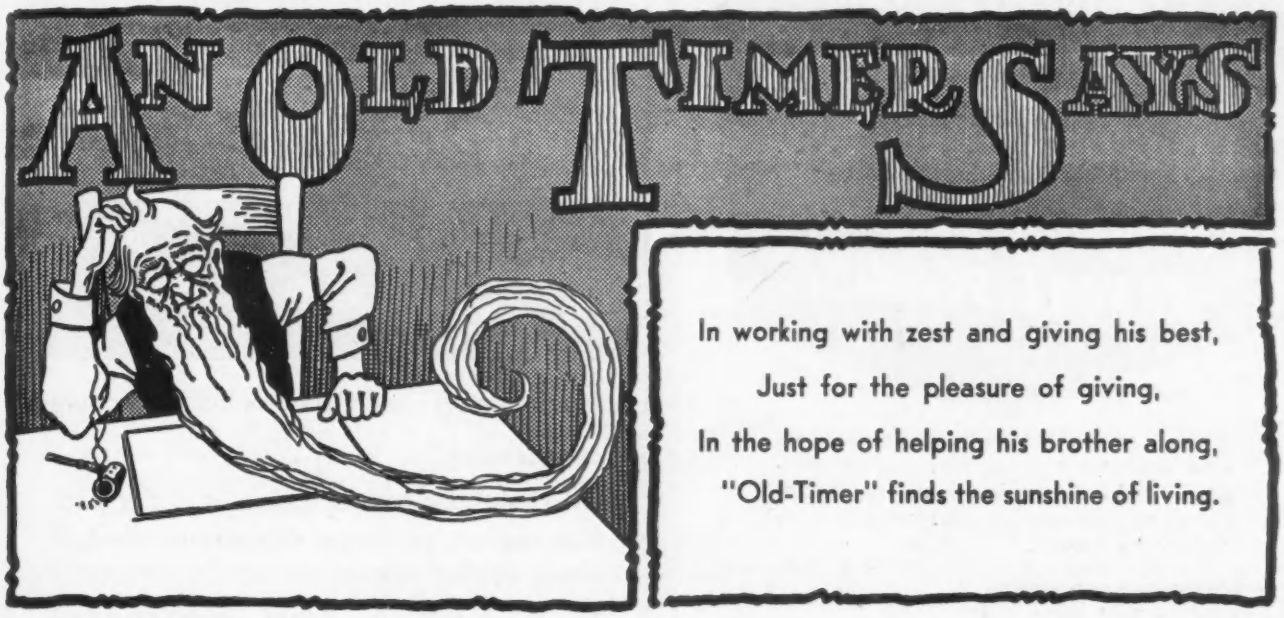
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In working with zest and giving his best,
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In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

YOU: What You Are and What You Can Be

WHAT YOU *are* just came naturally, but as to what you *can* be there is practically no limit.

We are, of course, referring to your efficiency as a textile manufacturer—matters not whether you are an operative, a section man, an overseer, an assistant overseer, a superintendent, a manager, or mill president.

The simple fact is that it should not be necessary for you to tell anyone that you are an efficient manufacturer, or that you have made a concentrated study of yourself, which has prepared you for promotion and a resulting increase in salary.

Because you can't increase your knowledge without people knowing it.

Your immediate associates will know it and your superior will know it. It will stand out like the proverbial sore thumb, and old man promotion will find you just as sure as death and taxes.

What you *are* has come to you without much effort, but you will have to decide whether you have sufficient determination to become what *you can be*. We are taking for granted that the majority of men who are in the textile business wish to increase their present incomes—to increase their self respect—to make a reputation for themselves among their associates —in short to "be somebody." Let's see what we can do about it.

Any business (and your job is a business) consists of assets and liabilities. Therefore, we believe one of your first problems is to determine how your assets and liabilities balance.

Remember, you are starting out to analyze a human mechanism, and it is one of the most complicated and at the same time one of the most simple mechanisms in the world to study. But a human body and a brain will respond to treatment or training with less effort on the individual's part than any business we know. The trouble is that most men do not realize this fundamental fact of human nature, and therefore think it is a tremendous job to even attempt to improve themselves.

Here is a simple illustration to show how easy it is to improve either mind or body: get ten one-pound gear blanks from the machine shop; test yourself by seeing how many you can muscle out —that is to hold in your hand with your arm straight out. Suppose you can hold out five pounds. Okeh! Now take three pounds and hold that out ten times each day for six days. That will take about ten seconds each day, so at the end of six days you have used up 60 seconds or one minute. Next take four lbs. for six days—then five pounds. Now you have used up three whole minutes, but we will bet that you can now muscle out six pounds easier than you handled five pounds the first time. Your muscles (your body) have shown improvement by the expenditures of three minutes of your valuable (?) time.

Now, let's see how your brain will respond to a little exercise. Select from your dictionary or your daily paper five words which you did not know how to spell. Write them down on a small piece of paper and place them in your purse or probably better, fasten them in your hat with scotch tape. Study them several times during the day, and be sure to study them just before you turn the light out at night, for one week. We believe

STAINLESS STEEL
SMALL WARE
FOR THE DYEHOUSE
Ruggedly Built for SEVERE SERVICE

Welded, reinforced construction gives Blickman small ware extra durability to withstand hard daily use in the busy dyehouse. For sizes and specifications send for our small ware circular.

STAINLESS STEEL PAILS
Built to take a beating. Welded construction for extra strength. Round corners for easy, thorough cleaning. Made of #18 gauge stainless steel for corrosion resistance. Ears are formed under rolled rim of the pail and transmit part of the load to the rim. Capacity to 20 quarts. Write for Bulletin 7028.

STAINLESS STEEL BUCKETS
Easy to clean. For extra strength quarter inch thick reinforcing bands are welded at top and bottom. Handles of ½ inch diameter mild steel rod are welded to upper reinforcing band. Round corner bottom speeds cleaning. Built of heavy gauge stainless steel. Capacity to 100 gallons. Send for Bulletin 7029.

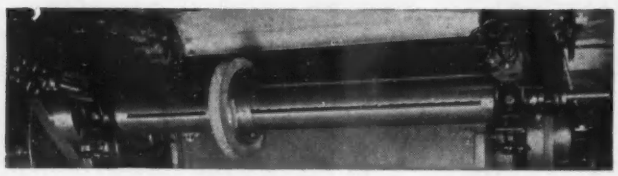
STAINLESS STEEL DIPPERS
Made to withstand rough handling. Hemispherical bowl of #16 gauge 18-8 stainless steel with #16 gauge stainless tapered handle-socket welded on. Capacities 1 pint to 4 quarts. Handle of 4 quart size reinforced. Send for Bulletin 7030.

"Blickman Built"

Write for further information

S. BLICKMAN, INC. 201 GREGORY AVE. WEEHAWKEN, N. J.
Manufacturers of stainless steel textile equipment, dye boxes, linings, cylinders, dry cans, rolls, hoods, tanks.

ROY
Heavy Duty
Bare Cylinder Grinder



For truing up Card Cylinders before clothing or redrawing.

Grinding your bare cylinders or doffer with this machine eliminates excessive grinding of newly applied wire.

B. S. ROY & SON COMPANY
Factory • Worcester, Mass.

REPRESENTATIVES IN THE SOUTH

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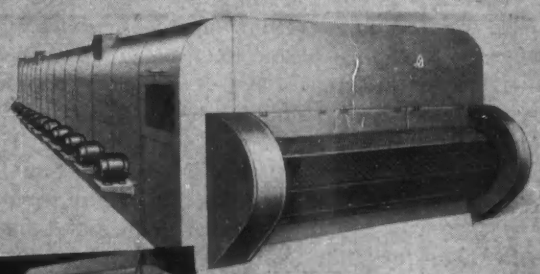
Greensboro, N. C.	Odell Mill Supply Co.	Tel. 2-2114
Charlotte, N. C.	Textile Mill Supply Co.	Tel. 5125
Columbus, Ga.	J. W. Davis	Tel. 3-7055
Dallas, Tex.	Textile Supply Co.	Tel. 7-4729

SARGENT'S STOCK DRYER
MODERN—AUTOMATIC



The new, Fisher Type Rotary Feed which has replaced the conventional spiked Apron Type Feeder

for Drying Wool, Cotton, Rayon, Other Synthetic Fibres, Rags

The Sargent Automatic Stock Dryer meets all modern requirements of textile mills for fast, trouble-free production, at minimum cost.

Its high-velocity, pressure-type fans are directly connected to standard frame, ball-bearing motors. The machine is vibration-free. Stock is carried on the Conveyor of heavy-gauge steel sectional flights which are built to specifications for the type of work required. The Conveyor presents a constantly smooth surface, traveling on a variable-speed, covered chain drive. Some of its other features include: highly efficient heating coils; low steam consumption; heavily insulated removable hinged panels for easy inspection of work in travel; thermostatic controls; ease of cleaning; a minimum of maintenance cost.

The machine's streamlined design affording a maximum area of drying surface, requires unusually small floor space for the volume of its high production.

Please write us for complete details.

C. G. SARGENT'S SONS CORPORATION
GRANITEVILLE, MASSACHUSETTS, U.S.A.

at the end of the week you will be able to spell them right off without looking at your list. Gosh! That was some hard job, wasn't it?

But you have accomplished something. You have planted five words in your mind that were not there before. You have added something to your education, something you will have as long as you live. You can accumulate money and lose it in many ways, but remember, brother, that knowledge put into that brain of yours, no one on earth can ever take away from you.

Right here let us repeat another thought which we have stressed in several articles: Your head which contains your brain is larger than any container in the world. Because you can fill up any container such as a barrel, a water tank, or a reservoir, but you can *never* fill up a human brain.

In the face of such simple facts which you know are true, can you explain why most men in the textile business just drift along waiting for promotion, especially when there is such a wide demand for men in so many good paying positions.

If you expect to rise above the average operating executive, you certainly will have to learn to deal with the state of mind of the people you work with, both operatives and your superiors. You must have the ability to understand both actions and attitudes of people.

You must realize that it is not money alone which operatives want.

If you expect to be a leader, you must wake up to the modern version of leadership, which is that the true desires of labor are more fundamental than material possessions. People want help to plan ways for them to save part of their earnings and what to invest those earnings in. (See Old-Timer article, "Mr. Mill President, What Can You Lose," June, 1947.)

The textile industry is going through a great upheaval, especially with regard to labor management. You must realize this fact and prepare yourself for it. That is why we say you must take stock of your assets and liabilities. Decide how to minimize your liabilities and increase your assets so that you can profit by analyzing yourself.

Please remember, Old-Timer can only help you to the extent that you will do your part and put his suggestions into practice. If you can only muscle out four pounds, you will never be able to muscle out five pounds just by reading about it. But if you apply the teachings of science and psychology as we have tried to explain them to you, you will certainly be able to see your own progress in a few months.

Much depends, of course, on how you invest your time. You have 24 hours; if you sleep eight hours and work eight hours or even ten hours, you still have six or eight hours to do something with.

(The subject of YOU will be discussed by Old-Timer in a future issue.)

PRECISION

KENTEX Aprons

Painstaking care safeguards the *absolute uniformity* of Kentex Aprons. Careful, individual checks are made throughout the stripping, cutting and sealing processes to be certain that they are absolutely uniform in thickness, width, length and circumference. That's why we can *guarantee* you a sure fit with Kentex!

If you haven't yet used Kentex Aprons, you can try them without cost on your frames. Just send us your specifications and we'll be glad to send free samples and quote you prices.

TEXTILE APRON COMPANY

EAST POINT, GEORGIA

J. B. KENNINGTON, OWNER

Sterling Ring Travelers

FREE HELP

What industry has competent engineers call regularly, check your work, offer suggestions and give you samples without charge?

STERLING still does it and you will find big savings can be made as a result.

Get on our scheduled list.

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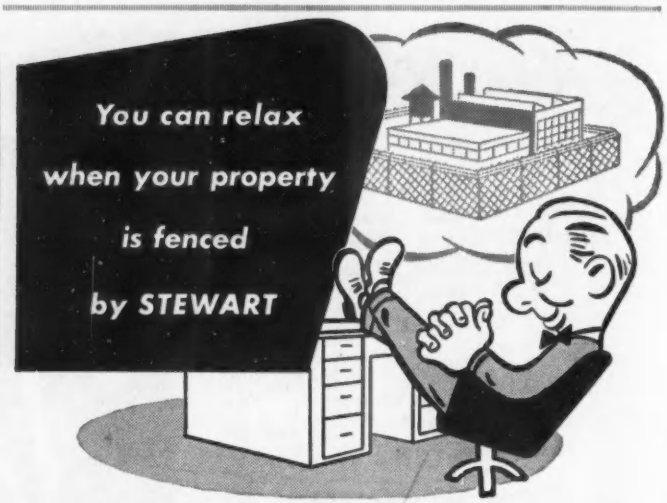
Box 803 Fall River, Mass.

STERLING RING TRAVELER CO.

FALL RIVER, MASS.



No need to lose any sleep over vandals molesting your industrial property when it's surrounded by a Stewart Chain Link Wire Fence. The All Beam construction of the Stewart fence framework makes it the heaviest and strongest chain link wire fence manufactured. You may be sure a Stewart fence will give you the utmost in protection, and many extra years of dependable, low cost service. Catalog No. 83 containing complete details and specifications on all styles of Stewart Chain Link Wire and Iron Picket Fences will be sent on request.

THE STEWART IRON WORKS CO., INC., 1524 Stewart Block
Cincinnati 1, Ohio ***Experts in Metal Fabrications since 1886***

Stewart IRON and WIRE FENCES

NEW EQUIPMENT
AND MATERIALS

New C&K Jacquard Head for High Speed Looms

The design of a new 2608 hook, double lift, double cylinder, high speed jacquard attains three major objectives: Smoother operation, reduced fixing and maintenance, and high speed capabilities to keep pace with modern high speed looms.

The jacquard is built double cylinder. Design cards are presented alternately to each of the two cylinders, reducing the speed of each cylinder to one half the speed of the loom crank shaft, thus making high speed operation possible without wear and tear on the jacquard cards. Two card packs are employed instead of one, an obvious advantage in any weave room weaving elaborate and wide repeat patterns conforming with present day and future style trends.

The cylinders are operated entirely independent of the griffs by a cylinder lever driven by a connecting rod from a crank on the loom bottom shaft. Cylinder slide shaft brackets, equipped with oil impregnated bronze bushings, are attached to the jacquard frame and provide outboard bearings to support the jacquard cylinders. Cylinder gudgeons are equipped with hardened steel sleeves operating in needle bearings lubricated by fittings located in the cylinder bushings.

Heavy type jacquard frames are employed. Frames are equipped with oil impregnated wood bushings for the griff shafts, with grease fittings as additional means of lubricating the shafts.

Four griff shafts are used in each frame providing a smooth working and perfectly balanced griff. Griff blades are 6¼" deep. Channel iron steady rails provide rigidity and an adjustment for the center griff racks.

A heavy "I" beam adjusting shoe arrangement with four 1" diameter adjusting screws and four heavy adjusting shoes support the jacquard and provide a more simplified means for adjusting the jacquard height. An adjustable triple crank on the loom bottom shaft drives the lifting and cylinder levers. Lifting lever and cylinder lever shafts are fitted with hardened steel sleeves operating in roller bearings.

Laboratory type stock dye kettle (Riggs & Lombard).

Lifting and cylinder levers are located above the jacquard. The griffs are thus lifted from above, reducing wear on the griff shaft bushings in the jacquard frame to a minimum.

Crompton & Knowles Jacquard & Supply Co., Pawtucket, Rhode Island.

For additional data, request item A-119, using business reply card on page 189.

Laboratory Stock Dye Kettle

A new four-in-one laboratory stock dye kettle can be used economically to dye sample lots in stock, skein, package or top form.

The machine, designated as Model SPT, has been designed to meet the need for a stock dye kettle that can handle sample lots of from two to four pounds efficiently, and at low cost. By first dyeing in this machine, the dyer is able to set the formula for his large production unit with accuracy, it is claimed.

The kettle is constructed of stainless steel. The cover is hinged and fitted with easily operated clamping handles, while a rubber gasket between the main tank and the cover insures against leakage.

While primarily a stock dye kettle, this machine is reported to effectively handle 10 one-half pound skeins, and by changing the spindle, a package or top can be dyed equally as well.

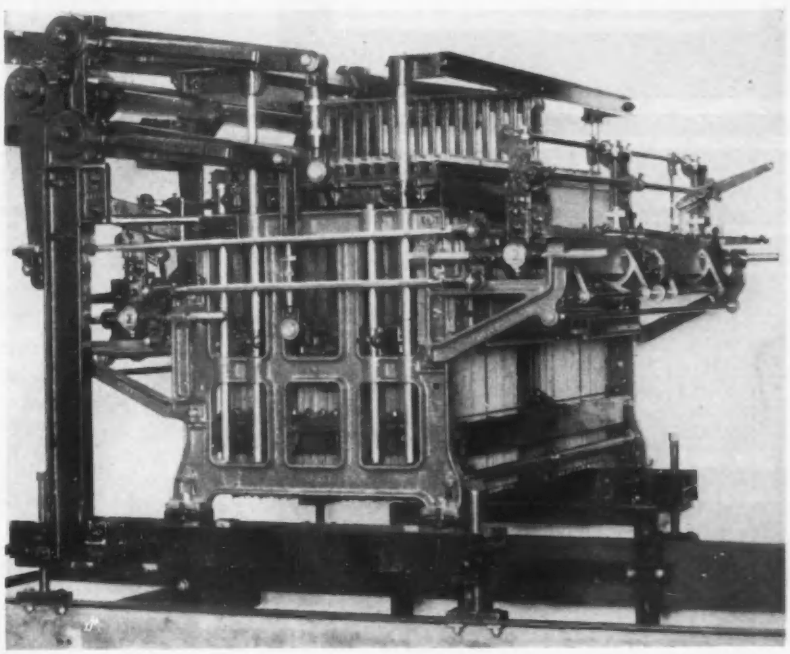
Riggs & Lombard, Inc., Lowell, Mass.

For additional data, request item A-106, using business reply card on page 189.

New Nylon Stripping Agent

Nylon stripping with almost complete dye removal may now be accomplished essentially without damage to the nylon fiber through the use of Textone, a sodium chlorite product, according to a recent an-

Double lift, double cylinder, high speed Jacquard head (C&K).



DARNELL

Maintain maximum employee efficiency – equip your-hand trucks and other movable equipment with DARNELL Casters and Wheels–SAVE MONEY and eliminate that mid-afternoon "bogging down" of production.

CASTERS

DARNELL CORP. LTD.
LONG BEACH 4, CALIFORNIA

60 WALKER ST., NEW YORK 13, N.Y.
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Keep your eyes on TAKK*

STATIC CONTROL
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Completely Effective
Completely SAFE
LOW Maintenance Cost
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Standard Engineered Installations for:

Looms	Roving Frames
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Other Textile Machines

Recommended by Leading Textile Consulting Engineers to their Clients.
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Trained Sales Technicians at your Service Located in Atlanta, Greenville, Greensboro, Richmond, New York, Boston, Buffalo, Toronto.

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AN AMAZING LUBRICANT

LUBRIPLATE 130-AA

Protects Against Rust and Corrosion

A super grease-type lubricant! A marvelous anti-seize compound and a real protector against rust and corrosion. From the standpoint of general utility and diversity of important uses, LUBRIPLATE 130-AA is unequalled. While it is ideal for the heaviest loads, this remarkable lubricant does not cause drag and actually conserves power. Write for a free copy of the LUBRIPLATE Service Hand Book.

LUBRIPLATE DIVISION
FISKE BROS. REFINING COMPANY
Newark 5, N. J. • Toledo 5, Ohio

DEALERS FROM COAST TO COAST • *See Your Local Classified Telephone Book*

nouncement. The new process may also be used for partial stripping. In either case, it is claimed, the chlorite exhibits its characteristic ability to attack color bodies with a minimum degradation of the fiber.

The procedure uses ordinary processing equipment, is faster, and gives more uniform results than other stripping methods, it is reported. For partial stripping, the goods are treated in a bath containing sodium chlorite and detergent, to which formic acid is added. After a total of 30 minutes in the stripping bath, the goods are rinsed and are then ready for redyeing.

For complete stripping the goods are first treated in a bath containing acetic acid and synthetic detergent, to which zinc formaldehyde sulfoxylate is added. After rinsing, the goods are stripped in a sodium chlorite bath.

Mathieson Chemical Corp., 60 East 42nd St., New York 17, N. Y.

For additional data, request item A-124, using business reply card on page 189.

New Model Impact Tool for Heavy Maintenance

Those heavy machinery maintenance jobs in the industrial field can now be easily handled with a new electric impact tool.

With standard accessories, the Model 8U tool is rated to run and remove nuts up to ⅝" thread size; drive and remove studs; extract broken cap screws and studs; apply and remove machine screws of all kinds; run wire brushes; drill brick, metal, and masonry; tap and ream. It may also be used for wood boring.

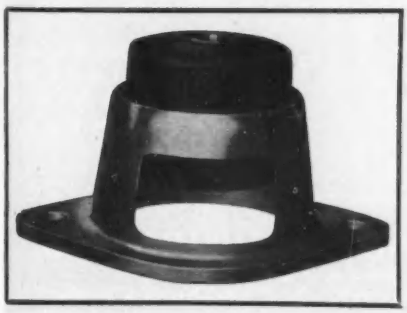
Ingersoll-Rand Company, 11 Broadway, New York, N. Y.

For additional data, request item A-125, using business reply card on page 189.

Vertical Snubbing Mountings

A new line of holder type vertical snubbing mountings has been developed. These mountings are designed to isolate vibration and control severe shock. They are easy to install, according to the manufacturer. If ordinary care is taken, precision base alignment is unnecessary, it is claimed.

Industrial V. S. mounting (Lord).



The mountings isolate vibration and protect against shock in numerous industrial applications, both mobile and stationary. Load capacity is from 120 to 310 pounds per mount.

It is reported that the mountings make it easier to hold tolerances, both in the mounted machines and in surrounding equipment; and that they reduce maintenance costs and remove the cause of much nervous strain and employee inefficiency.

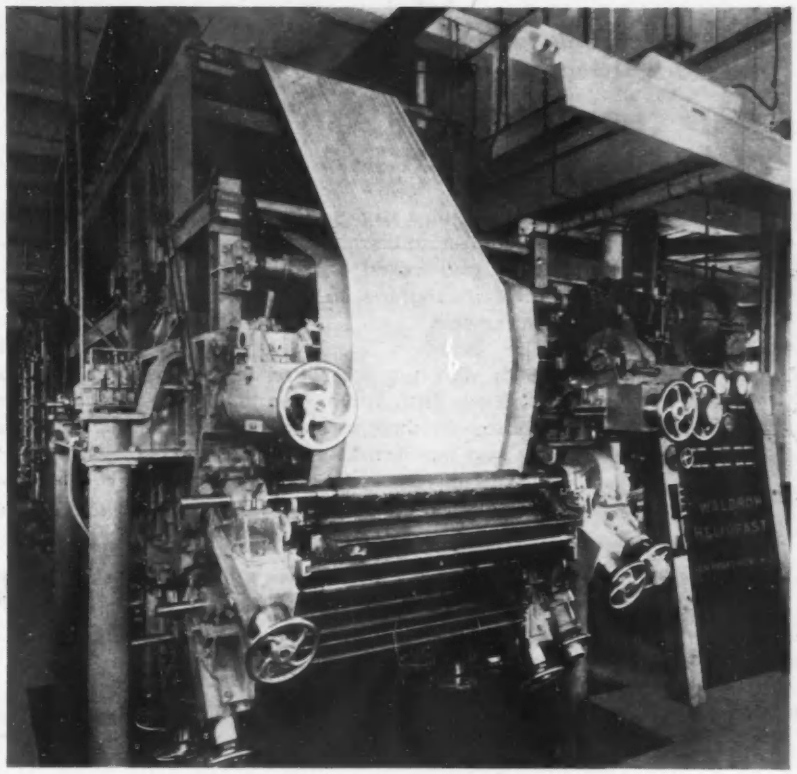
Snubbing shoulders are inactive during normal vibration, but snub against steel washers when impact occurs, thereby cushioning shock. Washers prevent excessive movement and over-stressing of the flexing element.

Three series of mountings are available. Series 279 has a deflection limit of ⅛" under load; Series 281, 3/16"; Series 282, ¼". The flexing element is made of highest quality rubber or oil-resistant neoprene, depending on the application.

Metal parts of the mountings are steel; the malleable iron holders have two generous openings to provide easy bolt tightening.

Lord Manufacturing Co., Erie, Pa.

For additional data, request item A-110, using business reply card on page 189.



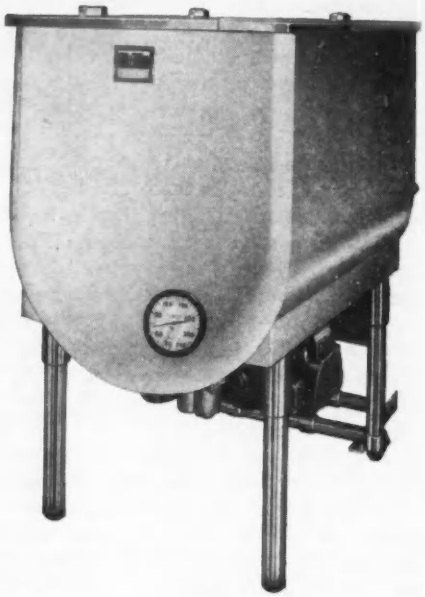
NEW "HELIOFAST" PRINTING PROCESS

A new "Heliofast" textile printing process which now accomplishes high speed multi-color textile printing without a back grey and without a cylinder has been developed. The printing operation by the Heliofast process goes from nip to nip maintaining commercial register at speeds of 230 yards per minute, according to the manufacturer. Much sharper and more clearly defined printed patterns are being produced with the smaller arc of printing contact in this Heliofast process, it is claimed.

John Waldron Corporation, P. O. Box 791, New Brunswick, N. J.

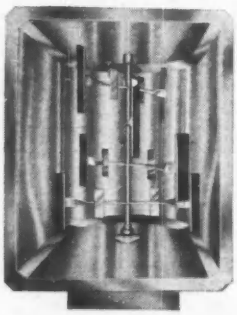
For additional data, request item A-112, using business reply card page 189.

Size Cooking at its Best!



For Smooth, Uniform Coating
Free from Lumps and Inconsistencies

THE "CHR" JACKETED SAN-I-TANK FOR SIZE COOKING



View above shows efficient mixing paddles with Neoprene blades which constantly agitate during size cooking to prevent lumping or adhering to tank sides. Tank cover seals out impurities.

Now the entire size cooking operation can be handled with utmost uniformity. Full batches of size can be cooked and mixed under ideal conditions for finest results in regards to highly important consistency requirements.

The Stainless Steel tank interior is completely smooth, allowing the entire contents to drain through the bottom flush valve. The tank may be easily fitted for automatic time and temperature controls. Other fittings and modifications are also available for special installations. Standard capacities are 150, 300, 500 and 1000 gallons. *Please ask for Bulletin CHR-48.*

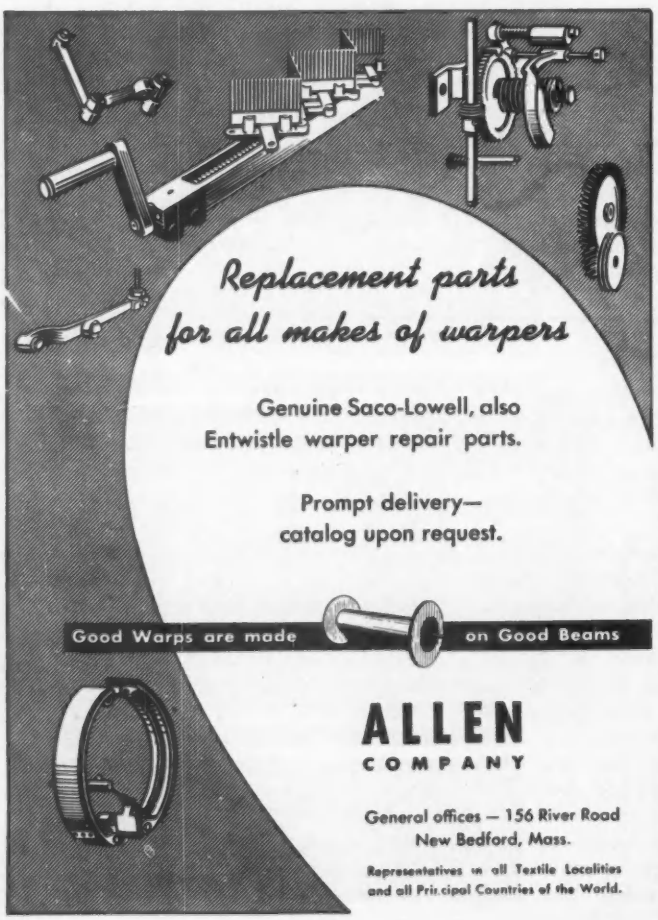
METAL GLASS PRODUCTS CO.

Manufacturers of Stainless Steel San-I-Tanks of all types

General Offices: Belding, Michigan

District Offices

ATLANTA	CHICAGO	NEW YORK
140 Walker St., S. W.	605 W. Washington Blvd.	420 Lexington Ave.



KALPINOL
for NYLON HOSIERY
Yarns wet with Kalpinol give a good stitch, then dry within two inches of the needles. Stitch remains set. Birdseyes or slipping of the stitch are avoided. Rolling is prevented, making seaming easier.
. . . a Kali lubricant that reduces friction on the needles and sinkers and also makes carrier tubes last longer.
For cleaning nylon size from your needles, sinkers, bits, etc., use K-N-K (Kali Needle Kleaner). It can be used straight or mixed with equal parts of water without separating
ONE OF A FULL LINE OF KALI TEXTILE CHEMICALS
KALI MANUFACTURING CO.
Manufacturing Chemists
427 MOYER STREET PHILADELPHIA 25, PA.

Dry chemical extinguisher (Ansul).

Dry Chemical Fire Extinguisher

A handy dry chemical fire extinguisher containing two pounds of dry chemical has been designed for effective use by inexperienced operators. In the small extinguisher field, the "Emergency Fireman" is said to provide maximum protection for flammable liquid and electrical fires. It is rechargeable on the spot after use.

The dry chemical is non-toxic, a non-conductor of electricity, non-corrosive and non-abrasive. It will not deteriorate, solidify or evaporate and therefore does not require periodic recharging, according to the manufacturer.

The fill cap on the Emergency Fireman is built into the mounting bracket. This makes the extinguisher ready for instant use the moment it is removed from the mounting bracket.

Ansul Chemical Company, Fire Extinguisher Division, Marinette, Wisconsin.

For additional data, request item A-120, using business reply card on page 189.

Deodorant Dispenser for Commodes

Janitizer deodorizes cabinet toilets to provide maximum sanitary conditions. The dispenser can be installed in any commode flush tank in one minute, according to the manufacturer. It is concealed out of sight so that it cannot be tampered with. There are no moving parts to wear; no wall space is required and there is no maintenance to perform.

The deodorant liquid drips constantly through the overflow pipe into the bowl. Capacity of dispenser is sufficient for 25-day supply.

General Scientific Equipment Co., 2700 W. Huntingdon Street, Phila. 32, Pa.

For additional data, request item A-105, using business reply card on page 189.

"Aqualized" Gums

Gum Tragacanth, Locust Bean (Carob) and Karaya can now be rapidly dissolved as a result of a process recently developed.

The new gums, known as "Aqua-

AUTOMATIC TIME CONTROL FOR DECATING MACHINES

An automatic time control system for holding decating operations at top productive capacity while maintaining uniformly high quality output has been announced.

The system has two electric timers, one for the steam cycle and one for the vacuum cycle, which are connected to energize the vacuum timer as steaming time ends.

The control system, shown in the drawing, operates as follows:

After the fabric is rolled upon a drum and the timers (2) set, the operator pushes start button (1). From this point on, the process is completely automatic.

When the start button is pressed, the timer completes an electric circuit to the coil of the electric-pneumatic relay (3) which allows compressed air to enter the line to the Pressuretrol (5) and to the Metaphram operated steam valve (4). The normally closed valve opens, admitting steam to the drum, and the mercury switch of the Pressuretrol is held in the open position by air pressure. At the end of the steam cycle, the electric-pneumatic relay is de-energized and the steam valve closes. The Pressuretrol contact closes, starting the vacuum pump motor.

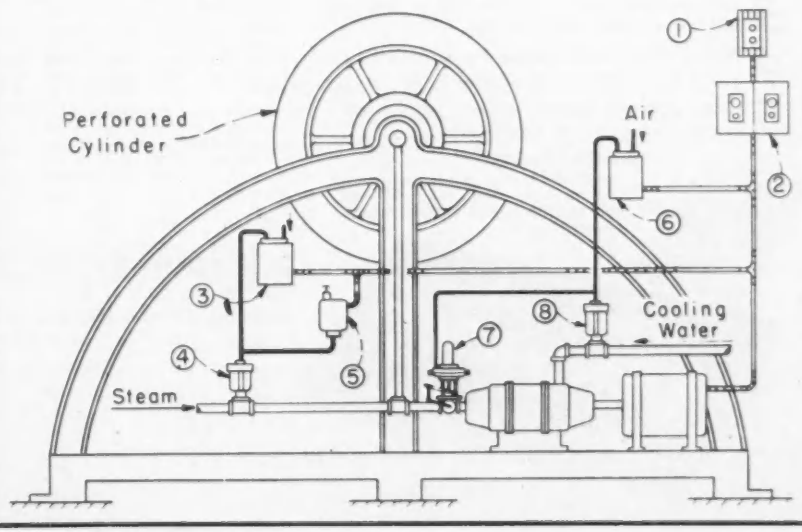
The load contact of the vacuum timer closes and a second electric-pneumatic relay (6) is energized admitting compressed air to the vacuum control valve (7) and to the Metaphram-operated water valve (8). The vacuum control valve opens, drawing air through the fabric and into the drum. The water valve opens simultaneously, admitting cooling water to the vacuum pump.

At the completion of the vacuum cycle, the vacuum and water valves close and the pump is stopped. The operator pushes the reset button, which removes power from the control circuit and resets the system for the next cycle. Signal lights are often incorporated in the circuit to indicate progress of the decating process.

This entire control system, exclusive of valves, may be obtained as a package unit. The push button starter, timers and relays are panel-mounted complete with the necessary wiring and piping connections.

The Brown Instrument Co., 4492 Wayne Ave., Philadelphia 44, Pa.

For additional data, request item A-107, using business reply card on page 189.



With labor costs as they are, the fast, *mechanized* TENNANT System can save you more *today* than ever—besides eliminating scrubbing. Here are 5 reasons why TENNANT "dry cleaned" floors are cleaner . . . brighter . . . safer—yet *cost you less:*

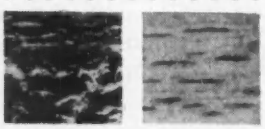
1 **Requires less manhours** for floor maintenance because floors can be cleaned *faster* . . . stay clean longer. Unlike rough, dirt-catching scrubbed floors, Tennant-cleaned floors are smooth, hard, dirt-resistant . . . clean up like magic! Saves time and expense.

2 **Makes floors easy to clean.** Fast, low-cost "dry cleaning" with a Tennant Machine keeps floors bright, durable. Only daily care is dry mop sweeping.

3 **Cuts accident costs.** Helps keep floors DRY and safe. Aids morale.

4 **Makes floors last longer** by protecting against dampness, decay and wear.

5 **Helps prevent losses** of yarn and cloth from splinter-snags and dirt.



HERE'S WHAT HAPPENS when you stop scrubbing your floors and switch to economical Tennant "dry cleaning."

Microphoto at left shows typical surface of a scrubbed floor. Note how water has broken down top wood structure and caused rough, jagged, dirt-catching splinters. This makes floor hard to clean; and it breaks down rapidly under heavy traffic.

In contrast, microphoto of a Tennant "dry cleaned" floor (right) shows how the bright, smooth, protectively sealed floor resists dirt and wear . . . and is easily cleaned with minimum manpower.

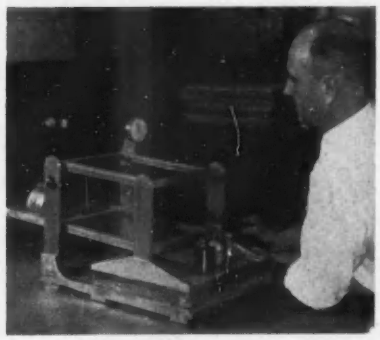
Write Today! Learn how mechanized "dry cleaning" can save you money. Ask for new bulletin "HOW TO GET BETTER RESULTS IN TEXTILE FLOOR MAINTENANCE."

G. H. TENNANT CO.
2585 North Second Street
Minneapolis 11, Minnesota

The way to finer floors
TENNANT
Floor Maintenance System

ESTABLISHED 1870

OFFICES IN PRINCIPAL CITIES



Instrument Measures Thickness of Mats and Blankets

With the Measure-Matic, even unskilled workers can consistently make accurate thickness measurements of such fibrous materials as jute, sisal, cotton, wool, glass fibers, and the like.

Fibrous mats and blankets are placed on the table of the Measure-Matic, and the platen lowered until it rests lightly on the material. Automatically, a dial-indicator records the thickness of the material within 1/100 of an inch.

Resilience of compressible and deformable materials can also be measured quickly and simply with the Measure-Matic.

Gustin - Bacon Manufacturing Co., 1412 West 12th Street, Kansas City, Missouri.

For additional data, request item A-117, using business reply card page 189.

lized" Gums, do not require the usual boiling, alkali treatments or mixing with sugar, glycerine, glycols or alcohol, according to the manufacturer. The process does not change the physical properties of the gums or their solutions, it is claimed.

Aqualized Gums are said to save many hours of dissolving time because they go into solution in a matter of minutes without the formation of lumps. They require no filtering and there is no loss of undissolved gum.

Glyco Products Co., Inc., 26 Court St., Brooklyn, N. Y.

For additional data, request item A-104, using business reply card on page 189.

Universal System of Yarn Counts

Full details of The Textile Institute's proposals for a universal system of yarn counts are given in a booklet now available from the Institute at 16 St. Mary's Parsonage, Manchester 3, England.

The system recommended is: For fibers and filaments, milligrams per kilometer; for yarns, grams per kilometer; for coarsest yarns and for intermediate products, grams per meter or kilograms per kilometer.

Identification of Textile Materials

Two additions to the "Handbook of Textile Technology" series have been published by The Textile Institute, 16 St. Mary's Parsonage, Manchester 3, England. These are: No. 2. Silk (Its Origin, Properties and Economics); No. 3. The Identification of Textile Materials.

Handbook No. 3, The Identification of Textile Materials, sets out the nature of the work of the Institute's unification of testing methods committee on the subject. It includes photomicrographs and four tables to assist in identifying different fibers (1) without using the microscope, (2) with the aid of a microscope, (3) analytical scheme for identification of textile fibers, and (4) sorting test for pure fibers by flotation.

Self-Locking Cap Screw

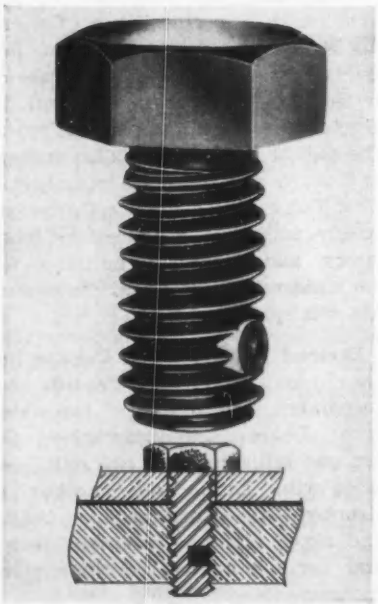
A new self-locking cap screw is a standard cap screw with an extremely simple built-in locking feature consisting of a nylon insert set into one side of the threaded segment. In operation the plug exerts a lateral thrust, axial to the plug, causing tight mating of the threads on the opposite side of the screw. This is sufficient to provide ideal locking torque, according to the manufacturer.

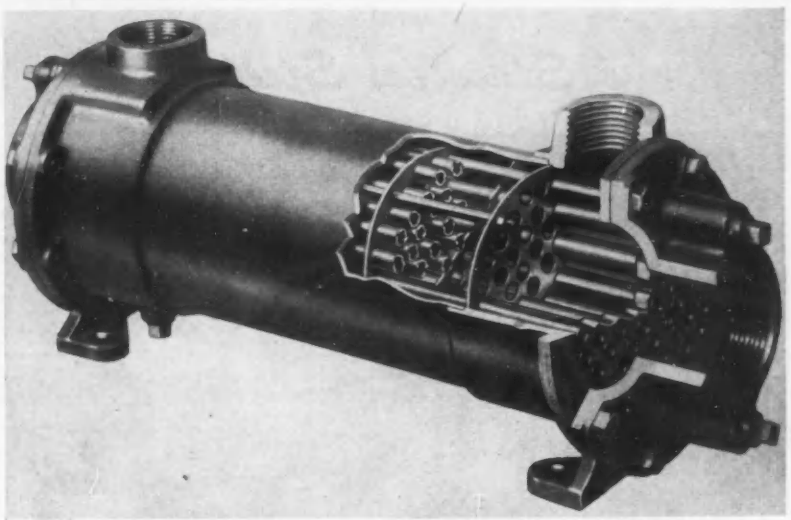
Advantages claimed are several: Long life and repeated usage of the screw without appreciable loss of torque; since no washer locking devices are used, these screws will not scratch, scrape, gouge or mar finished surfaces; the locking action will not distort threads; the self-locking feature is integral, eliminating handling of lock washers; savings on inspection and inventory.

Diamond Head Screw Corp., 6715 Hollywood Blvd., Los Angeles 28, California.

For additional data, request item A-115, using business reply card on page 189.

Self-locking cap screw (Diamond).





HEAT EXCHANGERS AVAILABLE FROM STOCK

An extensively redesigned line of mass produced, standardized heat exchangers has been announced. According to the manufacturer, the new type "BCF" is the first shell and tube exchanger to be carried in stock as shelf goods. For diesels, gas engines, compressors, hydraulic machinery, blowers, and many other industrial applications, the manufacturer claims to have achieved the lowest cost per btu transferred.

While the exchanger has long been referred to as a cooler due to its wide use in jacket water and lubricating oil cooling, it is also a heat exchanger in the true sense of the word. It is said to be equally effective in heat recovery, vapor condensing, and process heating applications.

Ross Heater & Mfg. Co., 1407 West Ave., Buffalo 13, N. Y.

For additional data, request item A-126, using business reply card on page 189.

Adjustable Color Pan for Printing Machines

A new stainless steel adjustable color pan which is adaptable to all types of surface printing machines is reported to eliminate the need for removing the pan or color roll for draining and cleaning.

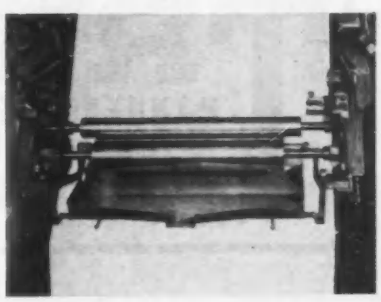
The pan is of sturdy construction and can be quickly installed on brackets that are already on the machine, according to the manufacturer. Once it is installed, it requires no further adjustment.

The complete assembly includes stainless steel color pan, supporting arm and color roll with longer journals.

John Waldron Corp., New Brunswick, N. J.

For additional data, request item A-122, using business reply card on page 189.

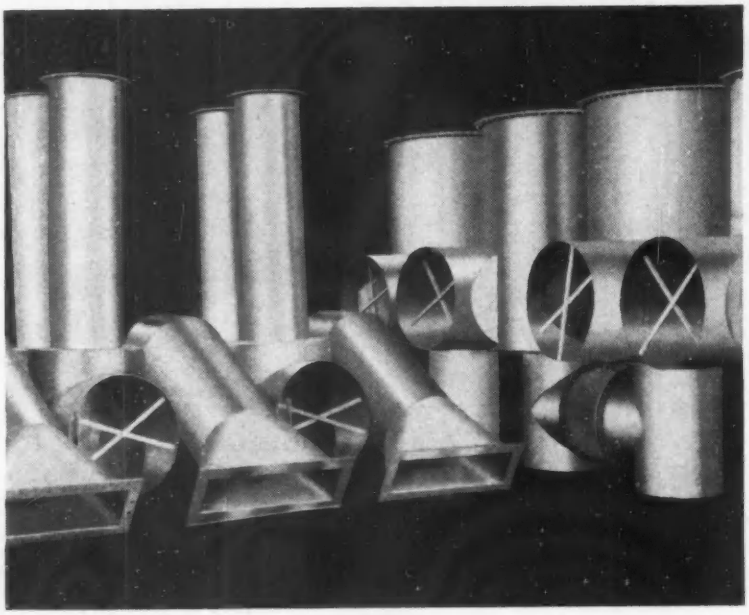
Adjustable color pan (Waldron).



LOWER UPKEEP . . . FEWER REPAIRS

WITH

Stainless Steel



WHEN THE CHIPS ARE DOWN, fabrication of *Stainless Steel* is a job for experts. Illustrated above are *Stainless Steel* ducts used to draw off gases under intense heat conditions. Coupled with the ordinarily destructive powers of gas fumes and smoke, only *Stainless Steel* can take it without peril to the product.

Textile, chemical, pulp and other basic manufacturing industries find that *Stainless Steel* fabrication from huge reflux towers to small machine parts means lower upkeep and fewer repairs and rejections.

Truitt's engineering service in the fabrication of *carbon and Stainless Steel* is available to industry. Should your need be tanks, vats, or other equipment, remember . . . Truitt, *one of the South's larger fabricators* . . . will gladly figure your job without cost or obligation.

TRUITT

MANUFACTURING COMPANY

• GREENSBORO, NORTH CAROLINA •

Fabricators of Solid Stainless Steel and Stainless-Clad Tanks • Dyeing Vats • Washing Tanks • Steam Drums • Storage Tanks for Acids and Alkalis • Mechanical Agitators • Separators • Stainless Steel Trucks • And Many Other Stainless Steel Products.

WHAT THE TEXTILE MILLS ARE DOING

Employees of **Lexington (N. C.) Rayon Plant,** Burlington Mills Corp., have received the Liberty Mutual Insurance Company's accident prevention flag in recognition of their outstanding industrial safety record of operating one million man hours without a lost time accident from December, 1947, to September, 1948.

The Edgar and Emily Hesslein Fund, Inc., New York, N. Y., has contributed $50,000 for the creation of a library for the **Philadelphia Textile Institute** to be erected on the new school site in Germantown, Pa. The building will be known as The Edgar & Emily Hesslein Library and will accomodate considerable more space than the present library.

Asheboro (N. C.) Weaving Corp. has leased a new factory building now nearing completion in Asheboro. The principals of the new company are Britt M. Armfield, Dumont Bunker and J. W. Stark. All sales will be handled from the New York office located at 450 Seventh Avenue. Production will be sold direct to the converting trade in the form of grey goods.

U. S. Rubber Co. has installed 65 looms in its Winnsboro, S. C., plant, to be used in experimental weaving of rayon suitings and cotton ginghams.

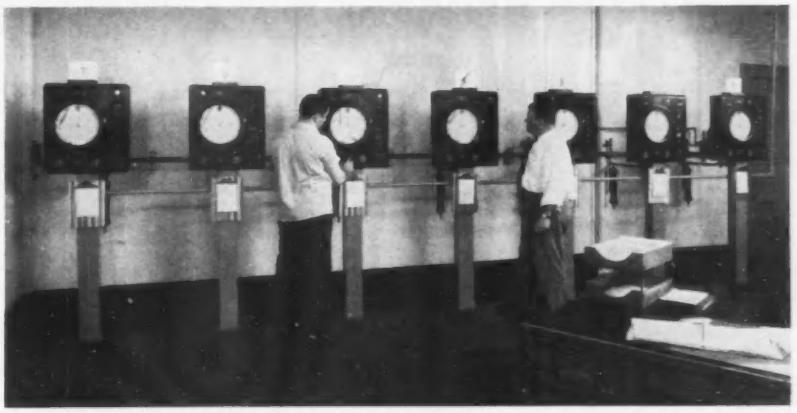
West Point (Ga.) Mfg Co., has announced that its subsidiary, **Columbus Mfg. Co.,** has plans for further diversification of its industrial fabrics by the addition of sheets and pillowcases to the lines, after June 1, 1949. The parent company has also authorized plans for an office building in West Point, which will cost approximately $400,000. A one-story laboratory and technical building for the research division at Shawmut, Ala., is proposed.

Esmond Mills, Ltd., of Canada has been purchased from Textron Incorporated by interests associated with Beacon Manufacturing Co. Esmond Mills operates two mills, one at Perth, Ont., and another at Granby, Que. Both produce cotton and rayon blankets and nap fabrics, and production will continue along the same lines.

LIPPITT WORSTED CO'S DYE HOUSE OFFICE FEATURES AUTOMATIC DYE KETTLE CONTROLS

This interesting installation of automatic controls is found in the dye house office of Lippitt Worsted Co., Woonsocket, R. I. The recording CycleLog controllers in the office of the overseer maintain complete automatic control of seven dye kettles in the adjoining dyehouse.

Photo courtesy, The Foxboro Co.



Pinecrest Cotton Mills, Inc., has plans for the construction of a textile manufacturing plant, which will weave sheeting and make finished bed and hospital linen, at Pine Bluff, Ark. It is understood that the initial outlay for the plant building and equipment will exceed $1,000,000.

Monument Mills, Housatonic, Mass., have been sold to George A. Horvath, Inc., a Massachusetts concern.

Two million dollars has been appropriated by the directors of **Cone Mills Corp.,** Greensboro, N. C., to finance the first phase of a program of employee home modernization in their four mill communities.

A plant for the manufacture of fine cotton goods which represents part of an expansion program is planned by **Maverick Mills** in Greenville, S. C.

Boaz (Ala.) Mills, cotton yarns, owned by Crescent Corp., Fall River, Mass., are reported to be arranging for the sale of the mill and equipment to new interests. Operations are scheduled to be continued as heretofore.

Tallassee (Ala.) Mills division of Mount Vernon-Woodberry Mills, Inc., cotton duck, drills, twills, etc., have plans maturing for an addition to the mill for increased output.

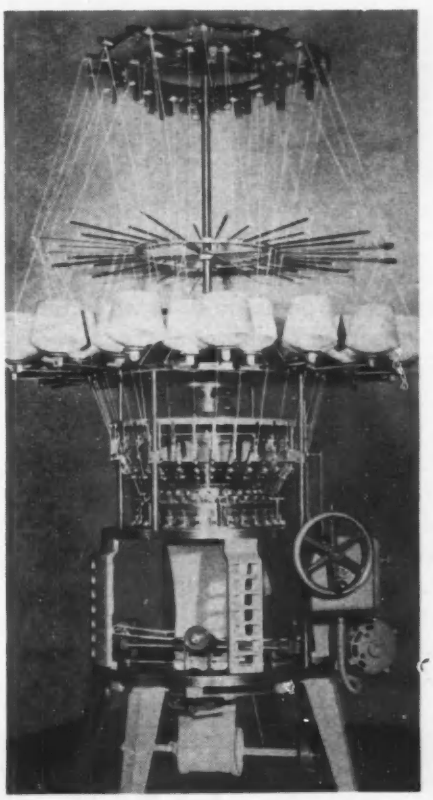
International Ramie Co., San Francisco, Calif., will construct a one-story mill in the San Joaquin Valley district for the production of ramie thread and other products, including sheetings, pillow cases, etc. Several smaller structures will be built for storage and distribution facilities, and a power house is planned. The entire project is reported to cost about $2,000,000. W. E. Clayton is president.

Newport Industries, Inc., Pensacola, Fla., has approved plans for the

BETTER SERVICE TO CUSTOMERS

Comes with the Speedier Production

of the EDMOS High Speed TYPE EEM



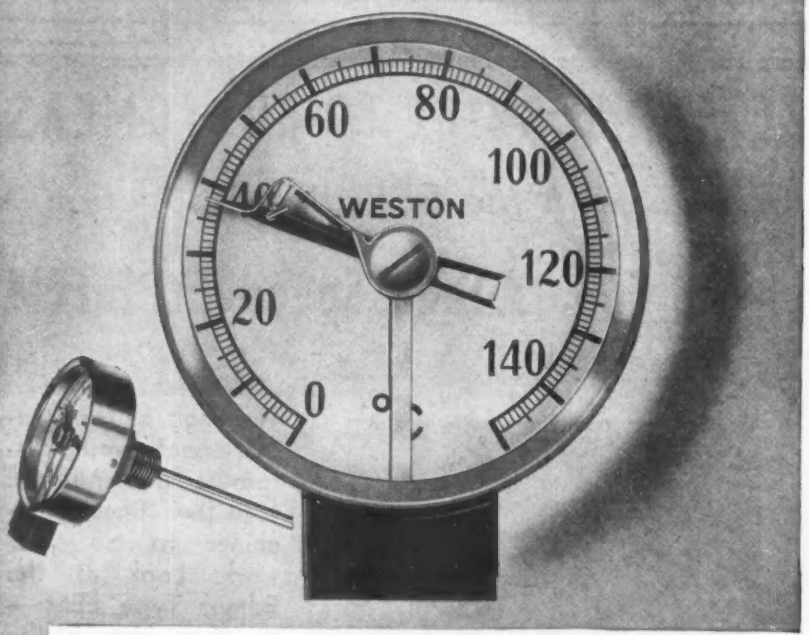
The high knitting requirements your customers demand call for the finest machines to do your work. Look at the Edmos Type EEM — see it in action at the Edmos plant — and you'll agree it has what you need: UTILITY — for Swiss rib fabrics; also ideal for "T" shirt and polo shirt fabrics. HIGH PRODUCTIVITY: featuring 1½ feeds per diameter inch; produces up to 4 times more work. ECONOMY: Simplicity of parts, easy to operate and maintain. Sizes: 12"-18 feeds to 24"-36 feeds. Available for prompt delivery.

EDMOS PRODUCTS CORP.

13 CHRISTOPHER AVE. **BROOKLYN, N. Y.**

NEW—

all-metal WESTON *Contact-making* thermometer



This new Weston combines the features of an indicating device with the advantages of an alarm or control instrument. A contact arm, mounted as shown above, is easily set to make contact at any temperature on the scale.

A terminal block on the periphery of the case makes electrical connection easy. The thermometer is all-metal, typically WESTON in ruggedness and reliability, with accuracy of ±1% as an indicating thermometer, and ±1½% as a contact making device. It is supplied in two types—for operation on either increasing or decreasing temperatures.

For complete information see your local WESTON representative or write Weston Electrical Instrument Corporation, 617 Frelinghuysen Avenue, Newark 5, New Jersey.

Industrial Thermometers | MAX-MIN Thermometers | Contact-making Thermometers

WESTON *Thermometers*

installation of a degumming plant to handle the ramie output.

Aspinook Corp., Jewett City, Conn., bleaching, dyeing and finishing of cotton goods, has arranged for a merger with their interest, **Adams (Mass.) Print Works, Inc.,** and **Lawrence (Mass.) Print Works, Inc.,** operating similar print and dye works. The main offices of the consolidated company will be at Jewett City.

Barrett Textile Corp., West Warren, Mass., a unit of Textile Printing Co., Inc., Warren, Mass., has resumed operations at the mill under the direction of a trustee appointed by U. S. District Court at Boston, Mass. It is understood that production will be continued for an indefinite period.

William Skinner & Sons, Holyoke, Mass., broad silks, nylon and rayon piece goods, have awarded general contract for the erection of an addition to the mill, reported to cost about $300,000, with equipment.

Exeter Mfg. Co., Pittsfield, Mass., ducks, sheetings, shirtings and other cotton goods, has discontinued operations at the mill permanently.

Kastle & Simon, Inc., New York, N. Y., has been chartered with a capital of 200 shares of stock, no par value, to operate a textile finishing mill. B. H. Simon is the principal incorporator and representative.

Textiles, Inc., Gastonia, N. C., is planning a gross expenditure of about $1,800,000 for the installation of additional equipment in their various mills.

Liquidation of **Greenville (N. C.) Spinners, Inc.,** has been completed, and all equipment has been sold to Dixie Mercerizing Co., Chattanooga, Tenn. The mill building was leased to other interests.

Jamestown (N. C.) Mills, Inc., recently organized, has purchased the plush weaving machinery and accessories of **Statesville (N. C.) Cotton Mills,** an interest of Burlington Mills Corp. Thomas Ragsdale is president of the Jamestown company.

United Processing Corp., Pawtucket, R. I., has been incorporated with a capital of 600 shares of stock, to operate a textile dyeing and processing mill. M. E. Stone, Pawtucket, is the principal incorporator.

Aromel Mfg. Co., Inc., Boston, Mass., has been incorporated to operate a mill for the manufacture of textile products. Irving Meline is president.

HELPFUL BOOKLETS FREE

Here is the "cream of the crop" of literature on textile subjects as prepared by TEXTILE INDUSTRIES advertisers to aid in mill operation and management. These reference books and catalogs are free for the asking and there is no obligation involved. Read through the list carefully for booklet on the subject or New Equipment in which you are interested. Then fill in the numbers of those desired on the coupon on page 189 and mail it to TEXTILE INDUSTRIES.

This service is restricted to those engaged in operation and management of textile industries

First Listing of New Publications

1-1. Cartridge Ball Bearing. Containing 28 pages and very well illustrated, this booklet describes the many applications of this versatile bearing, dimensional data, load rating, dirt protection, grease type, content and retention, and the bearing's remarkable ten-year service record without relubrication. Norma-Hoffman Bearings Corporation, Stamford, Conn.

1-2. "BCF" Exchangers. Bulletin 1.1K1 gives full treatment to the new Ross mass-produced exchangers which are now carried in stock for immediate shipment. Cut-away views illustrating construction, and line drawings showing sizes, dimensions and weights accompany brief text on various applications of this all-nonferrous unit. Ross Heater & Mfg. Co., Inc., 1407 West Avenue, Buffalo 13, N. Y.

1-3. Industrial Humidification. The "how" and "why" of humidification are explained in this interesting and well-illustrated booklet. Walton Laboratories, 1186 Grove St., Irvington 11, N. J.

1-4. Speed Measuring Instruments. The description, operation and selection of chronometric, centrifugal and resonant reed tachometers are attractively presented in Bulletin 35-45. James C. Biddle Co., 1316 Arch Street, Philadelphia 7, Pa.

1-5. Cast Iron Pulleys. Bulletin P-848 describes the Sprout-Waldron line of Blue Face Pulleys and contains the new list prices. The bulletin has a table of contents on the front cover for easy reference. Sprout, Waldron & Co., Muncy, Pa.

1-6. Guidebook for LCS Unit Substations. A 20-page planning and engineering guidebook prepared to simplify and speed the layout of Allis-Chalmers load center unit substations has been released by the Company. Dimensional and arrangement information enables industrial unit substation users to determine floor space and head room requirements as soon as the unit is specified. Allis-Chalmers Mfg. Co., S. 70th Street, Milwaukee, Wis.

1-7. Modern Slasher Production. Bulletin G-488 entitled "Modern Slasher Production with Reeves Variable Speed Control Equipment" is most informative and well-illustrated. Textile men will be interested in the latest developments in this field. Reeves Pulley Co., Columbus, Ind.

1-8. Corrosive Resisting Pumps. Model 40 Series M centrifugal Durcopumps are fully described in a new 20-page Bulletin, No. 815. These pumps are designed exclusively for the handling of corrosive solutions, and every element in their construction is calculated to increase service life, ease of maintenance and ease of adjustment. Every pump is adaptable to an extraordinarily wide range of corrosive service, as the wet ends are available in twelve alloys and all parts can be made interchangeable. The Duriron Co., Inc., Dayton 1, Ohio.

1-9. Preview of American Viscose Corporation. This booklet, which gives the reader an inside look and understanding, was especially prepared as an informal outline for the use of college graduates interested in general information about this Corporation. American Viscose Corporation, Industrial Relations Dept., 1617 Pennsylvania Blvd., Philadelphia 3, Pa.

1-10. Since the Days of Wooden Tom-Toms. This is a report on 60 years of pioneering and progress in textile dyeing and finishing machines produced by this manufacturer. This unusually attractive presentation has been prepared in such a way that it provides very interesting and informative reading throughout. Smith, Drum & Co., Allegheny Ave. at Fifth Street, Philadelphia 33, Pa.

1-11. Hydromatic Single Control Valve. Publication No. 4460 is devoted to Cochrane Zeolite systems and pressure filters featuring the hydromatic single control valve. This valve is, in effect, a six-position valve, with four normal operating positions and two standby positions. Cochrane Corporation, 17th St., below Allegheny Ave., Philadelphia 32, Pa.

1-12. Machinery for Knitting, Weaving and Dyeing. With text in three languages, English, Spanish and French, this latest catalog and reference book incorporates a general description of the leading types of domestic knitting machines as well as auxiliary equipment. Morris Speizman Company, 508 West 5th St., Charlotte 1, N. C.

1-13. Modern Batt Making. Pictured and described in the pages of this new booklet is the operation of this manufacturer's automatic batt making system. It is especially designed for the plant desiring moderate output. By varying the arrangement and the number of garnetts, the same basic system can be adapted to varying needs of virtually any batt plant. Proctor & Schwartz, Inc., Seventh Street and Tabor Road, Philadelphia 20, Pa.

1-14. "Modern Time and Cost Savers". Bulletin No. 62 contains detailed information and illustrations of gravity roller and wheel conveyors, supports, portable piling machines, horizontal, inclined and declined belt conveyors, horizontal loaders and unloaders which can be extended or retracted at will, and other types of conveyor units. Standard Conveyor Company, North St. Paul 9, Minn.

1-15. The Properties and Applications of Ultramarine Blue. This is the title of a new Calco Technical Bulletin No. 804 which discusses the early history of the natural color pigment and the introduction of its artificial counterpart. Many additional interesting facts are discussed with particular attention devoted to the basic principles which should guide the formulator in using Ultramarine Blue. Calco Chemical Division, American Cyanamid Co., Bound Brook, N. J.

1-16. Card Stripping System. Built-in stripping system can be eliminated by the use of this portable vacuum stripper, mounted on an all-welded steel dolly with roller bearing wheels and always available where it's needed when it's needed. Bulletin S-100 describes it in detail, complete with illustrations. The New England Machine Works, 574 East Main Street, Waterbury 16, Conn.

1-17. "Cloth Room Practices." A series of articles on cloth room practices, which recently appeared in TEXTILE INDUSTRIES, has been published in bulletin form. It is an excellently prepared bulletin and one which should prove most interesting to every mill man. Curtis & Marble Machine Co., 72 Cambridge Street, Worcester 3, Mass.

GENERAL ECONOMIC, MANAGEMENT . . .

4. HOW FACTORING CAN INCREASE PROFITS—Describes how factoring works out in keeping clients' capital liquid and attitude of factor toward checking credits, including typical balance sheet.—COMMERCIAL FACTORS CORP., New York City.

5. FACTORING AND FINANCING — Illustrated booklet on how factoring works, cost and credit information.—TEXTILE BANKING COMPANY, New York, N. Y.

7. RAYON TELLS ITS STORY TO THE PUBLIC—Folder containing reprints of advertisements explaining some of the many roles in which rayon is serving the American public.—AMERICAN VISCOSE CORPORATION, New York 1, N. Y.

9. TESTING IN MODERN INDUSTRY — This booklet includes many useful tables, conversion factors, equivalent yarn sizes and other information helpful in textile mills. Also describes specialized testing service. Available free to mill men on request.—UNITED STATES TESTING CO., Hoboken, New Jersey.

10. "LABOR AND MANAGEMENT BENEFIT BY INDUSTRIAL ENGINEERING PRINCIPLES" — 8-page illustrated folder outlining principles of industrial engineering as they apply to textiles.—AMERICAN ASSOCIATED CONSULTANTS, INC., New York, N. Y.

11. FLETCHER JUNIOR "SUPER-SELF-BALANCING" EXTRACTOR—Illustrated folder describing this new extractor with the highly efficient self-balancing arrangement which uses steel springs instead of rubber buffers.—FLETCHER WORKS, INC., Philadelphia, Pa.

PLANT AND PLANT MAINTENANCE . . .

102. "TANK TALK"—Sixteen page booklet of illustrations showing various types of elevated steel tanks constructed and erected by manufacturers as well as stand pipes, reservoirs, storage and high pressure vessels, cylinders, along with helpful technical data. Also a list of what a few of the cotton mills, etc., said.—R. D. COLE MANUFACTURING COMPANY, Newnan, Ga.

107. FINNELL SCRUBBERS — Illustrated leaflets describing and giving specifications for the new Finnell floor scrubbing machines.—FINNELL SYSTEM, INC., Elkhart, Ind.

115. ATOMIZER HUMIDIFIER—Recent issue of "Parks' Parables" on Turbomatic self-cleaning humidifiers, and automatic regulation. — PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

129. BAHNSON CENTRIFUGAL HUMIDIFIER—Bulletin 327 describes this completely self-contained industrial humidifier which requires only water feed and drain and electrical connection to install.—THE BAHNSON COMPANY, Winston-Salem, N. C.

135. SAFETY COLOR CODE—How six standard colors can be used to reduce hazards, cut down accidents.—E. I. DU PONT DE NEMOURS & CO., INC., Finishes Division, C44, Wilmington, Dela.

138. MAGNESIUM IN THE TEXTILE INDUSTRY—Illustrated booklet on properties of magnesium for spinning, twisting, winding, knitting machines, looms, beams, spools, bobbins.—ALUMINUM CO. OF AMERICA, Pittsburgh, Pa.

150. RIHCO HUMIDIFIERS AND COOLING SYSTEMS—Bulletin describes new atomizers with construction lessening air consumption in humidifier systems, evaporative cooling systems. — ALDRICH MACHINE WORKS, Greenwood, S. C.

151. INDUSTRIAL BRUSHES—Illustrated Booklet of industrial brushes featuring textile usage on shears, printing machines—also flock, raising and cylinder brushes.—M. W. JENKINS' SONS, INC., Cedar Grove, N. J.

152. AIR CONDITIONING FOR THE TEXTILE INDUSTRY—40-page illustrated book covering air conditioning from humidity control to complete refrigerated conditioning with installations, charts, covering ABC's of cooling textile mills.—CARRIER CORP., Syracuse, N. Y.

159. BAHNSON HUMIDUCT SYSTEM — Bulletin 330 describes this unit system of air conditioning for humidifying, cooling, heating, ventilating, filtering, and dehumidifying in any desired combination. —THE BAHNSON CO., Winston-Salem, N. C.

160. INSTALLING MACHINERY WITHOUT LAG SCREWS OR BOLTS — Booklet describing use of UNISORB pads for anchoring all types of machinery. —THE FELTERS COMPANY, Boston, Mass.

162. MODERN METHODS OF TEXTILE FLOOR MAINTENANCE—Illustrated treatise on the history of floor cleaning in textile plants and a detailed description of new methods for reducing floor cleaning costs, as well as preserving textile mill floors.—G. H. TENNANT COMPANY, Minneapolis 11, Minn.

163. LAWLOR FLOOR MACHINES — Illustrated pamphlet containing specifications and describing All-Purpose Floor Machines.—THE SELIG COMPANY, Atlanta, Ga.

166. OAKITE PLANT MAINTENANCE DIGEST—A 16-page manual describing materials and methods for handling 54 recurring maintenance cleaning and related tasks in factories and mills.—OAKITE PRODUCTS, INC., New York 6, N. Y.

167. DU PONT COLOR CONDITIONING FOR INDUSTRY—Booklet, color used to reduce maintenance costs, increase production, curtail fatigue, improve employee morale. — E. I. DU PONT DE NEMOURS & CO. (Inc.), FINISHES DIVISION, Wilmington, Delaware.

170. WHY IT PAYS TO ANCHOR YOUR TEXTILE MACHINES WITH UNISORB — Illustrated booklet discussing control of vibration and noise and how UNISORB reduces maintenance costs.—THE FELTERS CO., Boston, Mass.

172. VENTILATING FANS — Bulletin 3339 gives facts on Buffalo Ventilating Fans. — BUFFALO FORGE CO., Buffalo, N. Y.

175. MOISTURE—Illustrated Folder, "The Yarn Conditioning System for the Textile Industry of Tomorrow."—KEARNY MFG. CO., INC., Kearny, N.J.

177. DUCTLESS AIR CONDITIONING — Recent bulletin describing same.—AMERICAN MOISTENING COMPANY, Providence, R. I.

179. TOLEDO SCALES — A condensed catalogue which illustrates and describes all of the principal types of weight control equipment used in the textile industry. — TOLEDO SCALE COMPANY, Toledo, Ohio.

180. TANK MAINTENANCE — Illustrated folder describing R. E. McLean's methods of cleaning and painting water tanks and stand pipes. — R. E. McLEAN, Gatsonia, N. C.

181. AIR FILTRATION AND DUST CONTROL—24 pages on atmospheric control, including engineering data.—AMERICAN AIR FILTER CO., INC., 275 Central Avenue, Louisville 8, Ky.

183. ELECTROMAGNETS — Folder No. 99 describes and illustrates fire prevention practices for opening and picking by use of high intensity electromagnets and magnetic pulleys.—DINGS MAGNETIC SEPARATOR CO., 509 E. Smith St., Milwaukee 7, Wis.

POWER TRANSMISSION, MOTORS, BELTING, LUBRICATION . . .

211. JOHNSON BRONZE CATALOGUE NO. 460—Shows over 850 sizes of cast bronze bushings, 350 sizes of UNIVERSAL Bronze Bars and over 250 Electric Motor Bearings. — JOHNSON BRONZE COMPANY, New Castle, Penna.

212. GATES TEXTILE ACCESSORIES — Showing the increased efficiency and economy to be secured through the use of Gates cone belts, evener belts, card bands and loom binder cushions.—THE GATES RUBBER COMPANY, Denver, Colo.

216. LEATHER BOOKLET NO. 202 — Attractive book illustrating and describing BONDARON Special Tanned Leather as used in various forms such as Check Straps, Solid Round Leather Belting, Flat Belting.—CHAS. BOND CO., Philadelphia, Pa.

218. BALL BEARINGS ON TEXTILE MACHINERY—Catalog 9 gives advantages of ball bearings, describes types, illustrates each type of textile machinery.—THE FAFNIR BEARING CO., New Britain, Connecticut.

230. ALLSPEED DRIVES — This 6-page folder covers features, advantages, available size of variable speed drives for the textile industry. Also listed are horsepower and torque data, and unit dimensions.—WORTHINGTON PUMP & MACHINERY CORPORATION, Harrison, N. J.

231. V-BELT ENGINEERING DATA BOOK—Over 50 pages of pertinent engineering information including data on selecting a V-belt drive design of special V-belt drives, numerous standard tables, charts and belt and sheaves list prices. — MANHATTAN RUBBER MANUFACTURING DIV. of Raybestos-Manhattan, Inc., Passaic, N. J.

235. JOHNSON LEDALOYL BEARING BRONZE—Illustrated booklet telling the complete story of Johnson Ledaloyl Bronze, the newest development in self-lubricated bronze for textile bearings and bushings.—JOHNSON BRONZE COMPANY, New Castle, Pennsylvania.

236. LEATHER BELTING CALCULATOR—Handy and attractive calculator for determining belt, speeds, horsepower per inch of belt widths, etc., will be sent free on request.—J. E. RHOADS & SONS, Philadelphia, Pa.

244. TEXACO SPINDURA OILS—Folder on lubrication for all types of spindles, based on actual tests.—TEXAS CO., New York City.

246. CUTTING OPERATING COSTS—Nationwide Illustrated Survey showing how American textile mills cut operating costs with Multiple V-Belt Drives.—GATES RUBBER CO., Denver, Colorado.

251. OILITE BEARINGS AND PARTS—Catalog B-44 describes and illustrates Oilite bearings and parts for all industries. — AMPLEX DIVISION, Chrysler Corporation, Detroit 31, Mich.

263. NEEDLE ROLLER BEARING—Catalog Engineering and Application Data Tdition 32 contains full data on selection of proper Needle Roller Bearings and outlines uses of such in various commodities including textile uses, types, installations, lubrication, etc. — TORRINGTON COMPANY, Torrington, Conn.

264. NEW DEPARTURE SHOP MANUAL—Illustrated catalog showing ball bearing mounting and maintenance practice. Covers storage, cleaning, lubrication, types of bearings.—NEW DEPARTURE DIV., GENERAL MOTORS CORP., Bristol, Conn.

265. INTERCHANGEABLE BALL BEARING FOR REPLACEMENT—Charts showing numbers used by manufacturers to identify bearing characteristics, also information on specifications.—NEW DEPARTURE DIV., GENERAL MOTORS CORP., Bristol, Conn.

269. LUBRICATION AND MAINTENANCE OF BALL AND ROLLER BEARINGS—Illustrated bulletin describing efficiencies and economies of NON FLUID OIL for all types ball and roller bearings.—NEW YORK AND NEW JERSEY LUBRICANT CO., New York, N. Y.

270. MANHATTAN FLEXLASTICS — Illustrated booklet describing how flexlastics are used in the Manhattan and Condor line of belting and mechanical rubber goods.—MANHATTAN RUBBER DIVISION, Passaic, I. J.

271. CARDING, SPINNING AND WEAVING LUBRICATION—Informative bulletin describing advantages of NON-FLUID OIL over ordinary lubricants for the lubrication of carding, spinning and weaving machinery.—NEW YORK AND NEW JERSEY LUBRICANT CO., New York, N. Y.

272. HOUGHTON LUBRICATION CHART — Attractive chart listing lubrication recommendations for all mill departments and various textile machines.—E. F. HOUGHTON AND CO., Philadelphia, Penna.

276. SPEED CONTROL—Bulletin 20B6051G describes Texrope variable speed drives. — ALLIS-CHALMERS MFG. CO., Milwaukee 2, Wis.

277. PRECISION COMPOUND AND CHAIN DRIVE—Folder explaining more profitable operation of roving frames.—PRECISION GEAR AND MACHINE CO., Charlotte, N. C.

278. ROLLER BEARINGS—New 35-page Hyatt handbook, "Guide Lines," is a guide to the proper application of cylindrical roller bearings in machinery and equipment of all types.—HYATT BEARINGS DIV., General Motors Corp., Harrison, N. J.

279. OILITE BULLETIN—Discussion of uses of oil-cushioned, self-lubricating bearings in product design and maintenance is contained in this illustrated bulletin. A wide range of machine parts is offered.—AMPLEX DIV., CHRYSLER CORP., Detroit 31, Mich.

280. BALL BEARING PILLOW BLOCKS AND FLANGE CARTRIDGES—Folder LAK contains informative text on ball bearing pillow blocks and flange cartridges incorporating the Fafnir Wide Inner Ring Bearings suitable for new as well as replacement applications in textile machinery.—THE FAFNIR BEARING CO., New Britain, Conn.

281. MULTI-V-DRIVES—16-page bulleton on Q-D (quick detachable) heavy sheaves. Descriptive information on design, application, stock sizes, and 75,000 V-Drive combinations available.—WORTHINGTON PUMP AND MACHINERY CORPORATION, Harrison, N. J.

INSTRUMENTS, STEAM SPECIALTIES . . .

301. JOHNSON ROTARY PRESSURE JOINTS—Bulletin describing the rotary pressure joint which requires no packing, no lubrication and no adjustment, giving installation and maintenance istruction, types, sizes, dimensions and prices. — THE JOHNSON CORP., Three Rivers, Mich.

307. THERMOMETER AND PRESSURE GAUGES—Catalog 6705-R and 6706 give data on both circular and rectangular case pressure type thermometers for indicating, recording and controlling processing operations in textile industry.—BROWN INSTRUMENT COMPANY, Philadelphia, Pennsylvania.

311. PIPING POINTERS—Industrial maintenance book covering installation and handling of piping, valves, fittings. Well illustrated, practical tips. — CRANE CO., Chicago, Ill.

314. MOISTURE CONTENT CONTROL — Bulletin F-1705-1 giving details of features and benefits of moisture equipment control for slashers and textile application. — BARBER-COLMAN CO., Rockford, Ill.

315. CONTROL INSTRUMENTS FOR TEXTILE PROCESSES—32-page illustrated booklet describing controls for such processes as slashing, dyeing, bleaching, kier boiling, drying, air-conditioning, etc. —BROWN INSTRUMENT CO., Philadelphia, Penna.

316. HYDRAULIC POWER UNITS—Literature describing hydraulic unit, motor, pump, reservoir, valving a small compact unit for operating of hydraulic calenders, presses, hydraulic controls, etc.—B. F. PERKINS & SON, INC., Holyoke, Mass.

319. GUIDE TO CORRECT INSTRUMENT SELECTION—This completely revised edition gives a comprehensive bird's-eye view of the companies' entire instrument line. Bulletin 98170.—TAYLOR INSTRUMENT COMPANIES, Rochester 1, N. Y.

320. OAKITE POWER PLANT DIGEST—A 20-page manual describing materials and methods for handling 71 cleaning, degreasing, descaling, derusting, paintstripping and related operations encountered in power plants.—OAKITE PRODUCTS, INC., New York 6, N. Y.

321. RED-RAY BURNERS — Bulletin describing use of Red-Ray Burners in preheating and partial drying to increase capacity of frame.—RED-RAY MFG. CO., New York, N. Y.

322. DIAMOND SWING JOINTS—4-page illustrated folder describing the Diamond line of ball, swing and revolving joints for use on any system handling air, gas, steam, oil, or any fluid where reflexible connection is needed. — DIAMOND METAL PRODUCTS CO., St. Louis, Mo.

323. TENTER FRAME DRYER—Illustrated folder describing the features and operating principle of newly designed, high speed tenter frame dryer.—NATIONAL DRYING MACHINERY COMPANY, Philadelphia 33, Pa.

CARDING, SPINNING, WINDING . . .

401. LUMMUS DUSTLESS STEEL BLENDING FEEDERS—Bulletin describing automatically closing, positively locking door on feeders to prevent overloading, choking. — ALDRICH MACHINE WORKS, Greenwood, S. C.

402. AUTOMATIC CLEANING AND OVERHEAD HANDLING FOR TEXTILE MILLS—24-page bulletin describing the American Monorail Automatic Cleaner for preventing accumulation of lint on spinning, twisting, winding and warping machines. Also for cleaning monitors and card room ceilings.—THE AMERICAN MONORAIL CO., Cleveland, Ohio.

405. AUTOMATIC SPINNING CONTROL — New folder available describing the Numo automatic control specifically designed to eliminate uneven packages and tails.—NUMO MACHINE & ENGINEERING CO., INC., Charlotte, N. C.

407. CARD GRINDER INFORMATION—Folder on care of card grinders, part replacement, etc.—B. S. ROY & SONS CO., Worcester, Mass., and Greenville, South Carolina.

409. ROTO CONER—Bulletin describing Universal rotary traverse winder, known as the Roto Coner, producing open wound cones for knitting and warping; parallel tubes for package dyeing, twisting, and sale yarn.—UNIVERSAL WINDING CO., Providence, Rhode Island.

410. GETTING THE MOST FROM WINDING—Bulletin No. 118 covers the first 18 issues of this topic. Bulletin 192 covers issues 12 through 52. Informative and interesting.—UNIVERSAL WINDING COMPANY, Providence, R. I.

413. SONOCO PRODUCTS—A 60 page illustrated booklet giving description, specifications and charts of the many Sonoco products, including bobbins, cones, tubes, cork cots, roving cans, spools, rolls, etc.—SONOCO PRODUCTS CO., Hartsville, S. C.

416. THE BRIEF SAGA OF THE RING TRAVELER—An interesting history relative to the ring traveler, which is in reality the basis of the spinning frame, John Thorpe's invention of the ring traveler, the development of the spindle, and the invention of Rabeth's Bolster type spindle are covered. — NATIONAL RING TRAVELER CO., Pawtucket, R. I.

419. TEXTILE APRONS—Illustrated folder showing the steps in manufacture of genuine leather aprons for all types of long draft spinning and card room machinery.—TEXTILE APRON COMPANY, East Point, Ga.

421. **AUTOMATIC WINDERS** — Folder describing latest winding equipment with full automatic operation. Only one automatic head for up to 160 spindles.—ABBOTT MACHINE CO., Wilton, N. H.

422. **MODERN TEXTILE ROLL COVERINGS**—Illustrated booklet on roll covering problems with chart on correct usages. Also data on Acotex long draft aprons.—ARMSTRONG CORK CO., Industrial Division, TEXTILE PRODUCTS SEC., Lancaster, Pa.

423. **TEXTILE SHEET METAL PRODUCTS**—Folder on cylinders, card screens, licker-in screens, repair work. — JENKINS METAL SHOPS, INC., Gastonia, North Carolina.

427. **WINDING AND CREELING WARP YARNS**—Universal's Bulletin No. 244 contains an interesting treatment of this subject.—UNIVERSAL WINDING COMPANY, Providence, R. I.

428. **PNEUMATIC ROLL PICKER**—Attractive bulletin descriptive of the "Amoskeag" roll picker that removes fly and lint from the top rolls and other drafting elements in spinning and roving frames.—M-B PRODUCTS, Detroit 38, Michigan.

430. **"SILIXONICE" BEARINGS**—Folder is available on this new, frictionless bearing "that never needs lubrication."—DIXON LUBRICATING SADDLE COMPANY, Bristol, R. I.

431. **HYGROLIT YARN CONDITIONING SYSTEM**—General description of conditioning cotton, spun rayon, woolens, worsteds for twist setting, lubrication, moisture retention.—KEARNY MANUFACTURING COMPANY, INC., Kearny, N. J.

432. **PRECISION TEXTILE WINDING**—Bulletin on Kidde Tension and Density Control for winding rubber cores. — WALTER KIDDE & CO., INC., Belleville, N. J.

433. **AUTOMATIC TRAVELING CLEANERS**—Recent issue of "Parts' Parables" on automatic cleaners for spinning, warping, twisting.—PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

434. **WINDING MACHINES—WORK LOAD CALCULATIONS**—Reprints of series on winder operations from labor standpoint.—UNIVERSAL WINDING CO., Providence, R. I.

435. **DOUBLE DECK TWISTERS**—For accurate, high-speed twisting of silk, rayon, nylon, etc., to the finest of deniers are described in this new bulletin. Both the Jumbo (8-ounce to 16-ounce headless or take-up spool packages) and Acme (up to 10-ounce packages) machines are illustrated.—U. S. TEXTILE MACHINE CO., Scranton 8, Pa.

436. **MAINTENANCE INFORMATION FOR YOUR SCOTT TESTER** — Booklet containing maintenance data for calibration of Scott Testers, clamps for testers, gear-box lubrication, and recording.—SCOTT TESTERS, INC., Providence, R. I.

437. **SPINDLE TAPE LACING EQUIPMENT**—Circular No. 54 illustrating and describing the Clipper method of lacing spindle tapes.—CLIPPER BELT LACER CO., Grand Rapids 3, Mich.

429. **JUMBO DOUBLER TWISTER**—Doubling and twisting in one economical operation, combining from two to twelve ends of yarn, the U. S. Acme Jumbo Doubler Twister is described and illustrated in this bulletin.—U. S. TEXTILE MACHINE CO., Scranton 8, Pa.

440. **SADDLES**—Leaflet showing a few of the over 600 different types of saddles for both conventional and long draft spinning and roving frames.—DIXON LUBRICATING SADDLE CO., Bristol, Rhode Island.

441. **SKF BALL BEARING TENSION PULLEY FOR SPINNING FRAMES** — Attractive illustrated folder outlining the value of anti-friction bearing Tension Pulleys for all types of spinning frames.—SKF INDUSTRIES, INC., Philadelphia, Pa.

442. **COMPARATIVE YARN TABLE**—Chart giving wooden number (cut and run system), also cotton, worsted and metric system; also, Comparative Rayon Denier Yarn Table.—VICTOR RING TRAVELER CO., Providence, R. I.

444. **901 LUSTRE**—Attractive illustrated booklet describing Houghton's soluble softening and conditioning oils for textile fabrics and yarns.—E. F. HOUGHTON AND CO., Philadelphia, Penna.

448. **ROLLER BEARING SPINDLES**—Illustrated booklet showing various types of Marquette Roller Bearing Spindles. The unique full-floating footstep bearing is pictured in cut-away views, and its advantages are described.—THE MARQUETTE METAL PRODUCTS CO., Cleveland, Ohio.

449. **FOSTER BULLETIN A-95** — Describes the modern Foster Model 102 winder that eliminates ribbon wind. — FOSTER MACHINE CO., Westfield, Mass.

450. **IONOTRON STATIC ELIMINATOR**—A 4-page, illustrated catalog section describes a new static eliminator which operates without electric power or physical contact. There is no operating expense.—U. S. RADIUM CORP., New York 7, N. Y.

452. **DEVELOPMENT IN WARP SIZING**—Technical bulletin describing the successful new development of applying a warp lubricant separately from and subsequent to sizing with starch and in the same operation. This patented process involves the use of a Warp Lubricator Unit and SLIX, a new one-piece liquid sizing material.—SOUTHERN SIZING CO., Atlanta, Ga.

453. **CHAPMAN STATIC NEUTRALIZER** — The "how" and "why" of this unit are covered in this bulletin, plus the factors affecting successful application to cotton cards, woolen cards, and cotton drawing frames.—CHAPMAN ELECTRIC NEUTRALIZER CO., Portland, Maine.

WEAVING, SLASHING . . .

502. **TEXTILE COUNTERS**—Catalog 737 describing pick counters for looms, hank counters for spinning, yardage counters for cloth looms, etc.—VEEDER-ROOT, INC., Hartford, Conn.

510. **THE ROMANCE OF PRAIRIE GOLD**—Attractive illustrated book which tells the story of corn and the uses of corn products in industry.—CORN PRODUCTS SALES CO., New York, N. Y.

512. **BRIGHT SPOT IN THE PRODUCTION PICTURE**—Folder on more loom speed through Hunt loom spreaders.—HUNT MACHINE WORKS, INC., Greenville, S. C.

513. **SEYCO PENETRANTS FOR YARN CONDITIONING**—Folder describing the scientifically formulated Seyco sizing. — SEYDEL-WOOLLEY & CO., Atlanta, Ga.

514. **SLASHER HOODS** — Pamphlet describing drip-proof slasher hoods for cotton or rayon slashers. Roof or sidewall exhaust.—WOLVERINE EQUIPMENT CO., Cambridge 42, Mass.

515. **TEXTILE COUNTERS**—Catalog No. 50 illustrating and describing complete line of Producimeter Loom Pick Counters; Hank Counters; Yardage, Electric and Predetermined Counters; Tachometers, etc. — DURANT MANUFACTURING CO., Milwaukee 1, Wisconsin.

516. **WEAVE ROOM ACCESSORIES**—Weave room accessories catalog and literature on new plastic bronze bearing sheave, which solves a troublesome weave room problem.—EMMONS LOOM HARNESS COMPANY, Laurence, Mass.

517. **LOADING SYSTEM**—Bulletin 417, on pneumatic loading system for Saco-Lowell slasher size box squeeze rolls, contains installation photo, features, specifications, and prices.—THE FOXBORO COMPANY, Foxboro, Mass.

518. **NIAGARA TWIST-SETTER**—Folder describing the revolutionary Niagara Twist-Setter which has no moving parts. The yarn is sprayed from all sides to afford maximum economy.—SEYDEL-WOOLLEY & CO., Atlanta, Ga.

519. **WOODEN BEAM HEADS, WARPER BEAMS, AND WARPING MACHINERY FOR ALL FIBERS**—62-page illustrated booklet descriptive of and giving specifications for the Allen line of beam heads, warper beams, warping machinery, stop motions and cloth rolls.—ALLEN COMPANY, New Bedford, Mass.

520. **PNEUMATIC LOADING SYSTEM**—Bulletin 413 contains installation photo, features, specifications and prices for pneumatic loading system for Charles B. Johnson Machine Works slasher squeeze rolls.—THE FOXBORO COMPANY, Foxboro, Mass.

521. **STEEL WARP BEAMS**—20 page catalog No. 45 illustrating Standard and Special Purpose Warp Beams for the wearing industry, both broadcloth and narrow fabrics. Also Textile Machinery Specialties.—MILTON MACHINE WORKS, Milton, Pa.

522. **STARCH STABILIZER** — Leaflet describing new material to prevent jelling and to improve the cold fluidity of starch dispersions.—R. T. VANDERBILT COMPANY, New York 17, N. Y.

524. **JOHNSON WARP SIZER**—12 page fully illustrated booklet, describing the 7 cylinder sizer with stretch indicator and finger-tip control of stretch. A point-by-point analysis. — CHARLES B. JOHNSON MACHINE WORKS, Paterson, N. J.

525. **GATES LOOM ACCESSORIES** — Catalogs MRG-418, MRG-421, MRG-423 describe the advantages of bag straps, harness straps and drop box pickers made from a remarkable new material called Tex-Hide. Catalog MRG-419 describes the advantages of a new "Practive-Rib" take-up roll covering.—GATES RUBBER CO., Denver 17, Colorado.

527. **COTTON SLASHERS**—Photographs and detailed information are contained in this 16-page folder which describes the new WPF&M Slasher. Also included in the folder are descriptions of three types of creels and head ends and other advanced optional equipment.—WEST POINT FOUNDRY & MACHINE COMPANY, West Point, Ga.

529. **PARTS CATALOGS FOR WPF&M SLASHERS, SIZE KETTLES AND PUMPS**—This 42-page illustrated catalog of parts contains exploded views and part numbers for quick identification.—WEST POINT FOUNDRY & MACHINE COMPANY, West Point, Ga.

DYEING, FINISHING, CLOTH ROOM . . .

602. **ALUMINUM IN THE CHEMICAL INDUSTRY**—Published by Aluminum Company of America. Seventy-eight pages. Text and illustrations covering adaptability of aluminum and aluminum alloys to chemical industry applications and characteristics governing recommended uses. — ALUMINUM COMPANY OF AMERICA, Pittsburgh, Pa.

610. **PROCTOR DRYING MACHINERY FOR THE TEXTILE INDUSTRY**—Illustrates descriptive catalog on all types of dryers for raw stock, warps, package dyed and automatic skein yarn. Also includes Preboarding and Automatic Boarding Machines for hosiery.—PROCTOR & SCHWARTZ, INC., Philadelphia, Pa.

611. **BRUSHING AND SHEARING MACHINES**—Illustrated literature on the new Hermas Brushing Machine for use light sheeting to heavy ducks; also on Hermas A-V Shears.—HERMAS MACHINE CO., Hawthorne, N. J.

612. **RADIANT HEAT IN TEXTILE INDUSTRY**—New illustrated book on uses of radiant heat, data on fuel consumption, evaporation, etc.—RED-RAY MFG. CO., New York, N. Y.

614. **STRIPS IN ROLLS**—Form No. CP-643 illustrated folder showing over 25 slitters and roll winders for textile use.—CAMERON MACHINE CO., Brooklyn, New York.

618. **ENGINEERING PROPERTIES OF MONEL**—Technical Bulletin T-5, giving detailed information on strength and ductility, working properties, resistance to various types of corrosion and other data on Monel Metal. — INTERNATIONAL NICKEL CO., INC., New York, N. Y.

617. **AUTOMATIC CONTROL SYSTEM FOR CONTINUOUS BLEACHING**—Illustrated folder describing the new method of controlling the temperature, pressure, and liquid level in the continuous bleach operation.—TAYLOR INSTRUMENT COMPANIES, Rochester 1, N. Y.

619. **S FOR S**—Illustrated folder describing features of Blickman stainless steel Dyehouses. — S. BLICKMAN, INC., Weehawken, New Jersey.

620. **DYE HOUSE VENTILATION**—Pamphlet describing stainless steel exhaust systems for pieces dye kettles. Equipment for stock dye houses. Tempering supply air units and controls.—WOLVERINE EQUIPMENT CO., Cambridge 42, Mass.

621. **INFRA-RED RADIANT HEAT GENERATORS**—Illustrated bulletins on infra-red technology and applications throughout Textile pre-drying, drying, polymerizing, printing, and other heat-processing operations. — CARBOMATIC CORPORATION, New York, N. Y.

622. **FILT-R-STIL**—Attractive illustrated booklet describing the FILT-R-STIL method of chemically purifying water.—AMERICAN CYANAMID & CHEMICAL CORP., New York 20, N. Y.

623. **TENSION CONTROLS**—Form No. C. F. 440 illustrating various types of unwind stands for use in maintaining constant tension on web. Some equipped with photo-electric side register controls.—CAMERON MACHINE CO., Brooklyn 2, N. Y.

625. **BALL BEARING ROLLER TYPE SCRAY**—Circular No. 904 describing this scray which is for use in handling heavy and large size rolls of cloth. This is used either in finishing plants or in the cloth room of cotton mills.—BIRCH BROS., INC., Somerville, Mass.

626. **GUIDER AND GUIDING EQUIPMENT**—This booklet entitled "Mount Hope Precision Guider and Guiding Equipment" describes this latest development in guiding equipment. The new guider, it is claimed, makes possible automatically controlling the lateral movement of cloth within closer limits than ever before possible.—MOUNT HOPE MACHINERY CO., Taunton, Mass.

629. **ELIMINATION OF SALT HANDLING AND WASTE**—Information about the Storage-Type Lixator.—INTERNATIONAL SALT CO., INC., Scranton, Pa.

630. **VAT DYEING OF WOOL**—Write for Calco Technical Bulletin No. 797 outlining fundamental dyeing procedures, and explaining new advances in the technology of wool dyeing and finishing.—CALCO CHEMICAL DIVISION, AMERICAN CYANAMID CO., Bound Brook, N. J.

631. **THE LIXATE PROCESS**—Fully illustrated booklet describing process for scientifically controlled brine operation. — INTERNATIONAL SALT CO., INC., Scranton, Pa.

633. **PRINTING WITH ARIDYE PIGMENT COLORS**—Bulletin F-1 describes preparation and application of pigmented water-in-oil emulsions for printing cotton, rayon, and other fabrics.—INTERCHEMICAL CORPORATION, TEXTILE COLORS DIVISION, Fair Lawn, N. J.

634. **APPLICATION OF INTERCHEM ACETATE DYES**—Bulletin LAD-1 describes procedures for dyeing and printing acetate rayon and nylon fabrics with new line of highly dispersed acetate dyes.—INTERCHEMICAL CORPORATION, TEXTILE COLORS DIVISION, Fair Lawn, N. J.

DYESTUFFS, CHEMICALS, SOAPS . . .

705. **THEORETICAL AND APPLIED SILK-SOAKING**—Attractive 25-page booklet outlining methods of silk-soaking and outlining investigation on the soaking, back-winding and degumming of silk.—HART PRODUCTS CORP., New York City.

712. **LIOVATINE ED**—Vat dyeing assistant increasing penetration and level dyeings with maximum yield of color.—SANDOZ CHEMICAL WORKS, New York City.

715. **AQUAROL AND ARKANSAS PRODUCTS**—Bulletins on Aquarol, water repellent finish with method of preparing bath; also on other Arkansas products for cotton, wool, silk and rayon, hosiery processing.—ARKANSAS CO., INC., Newark, N. J.

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725. TEXTILE PROCESSING — Bulletin No. 5, interesting and informative, concerns itself with textile processing with synthetic detergents.—ARMOUR & COMPANY, 1355 West 31st St., Chicago, Ill.

735. LEVELENE—Booklet describing use of Levelene for leveling vat and direct colors. Also for stripping down vat colors.—AMERICAN ANILINE PRODUCTS, INC., New York, N. Y.

740. MONSANTO CHEMICALS—212 page illustrated buyers' guide for users of chemicals including useful tables, chemicals, information.—MONSANTO CHEMICAL COMPANY, St. Louis, Mo.

749. LUPOMIN Q—Pamphlet outlines the application of the quaternary ammonium compound recommended for treating natural and synthetic fibres to give soft hand, lubrication, odorless finish, brighter shades, etc.—JACQUES WOLF & CO., Passaic, N. J.

752. CAUSTIC SODA BOOK—Elaborate 72-page text containing useful graphs, charts, diagrams and descriptive photographs designed for use of the technical men, buyers, executives, operating officials and engineers in textile mills.—COLUMBIA CHEMICAL DIVISION, PITTSBURGH PLATE GLASS CO., Pittsburgh 13, Pa.

754. THE ION EXCHANGE PRINCIPLE AND ITS APPLICATION—8-page illustrated folder illustrating the manner in which ionic and ion exchange materials are applicable to the textile field. — AMERICAN CYANAMID COMPANY, New York 20, New York.

755. LUPOMIN—Leaflet outlines the advantages of the cation active softener which is suitable for use on cotton, linen, silk, wool, synthetic fibres and mixed fabrics. A small percentage of lupomin gives a supple, smooth hand.—JACQUES WOLF & CO., Passaic, New Jersey.

756. CEGLIN—Attractive illustrated booklet describing the application of ceglin (cellulose ether) to many types of fabrics. — SYLVANIA DIVISION, AMERICAN VISCOSE CORP., New York 17, N. Y.

758. DRUCOMINE A—An effective cationic finishing agent with minimum effect upon white fabrics and upon the shade and light fastness of dyestuffs.— E. F. DREW & CO., INC., Boonton, N. J.

760. SYN-O-TOL CB — A highly concentrated, non-sulfonated cocoanut amide condensate. Recommended for all wet cleaning operations. — E. F. DREW & CO., INC., Boonton, N. J.

762. ONYX TECHNICAL DATA SHEETS—Two new data sheets describing the use, advantages, and applications of Xyno Resins S 50 and Xyno Resin 333.—ONYX OIL & CHEMICAL COMPANY, Jersey City 2, N. J.

764. GENERAL PRODUCTS LIST—20 page illustrated booklet providing complete information on Hooker chemicals and outlining the specialized Hooker processes.—HOOKER ELECTROCHEMICAL COMPANY, Niagara Falls, N. Y.

765. HOSIERY FINISHES AND FORMULAE—Attractive new booklet describes the Amalgamated line of hosiery finishes and gives numerous finishing formulae.—AMALGAMATED CHEMICAL CORPORATION, Philadelphia 34, Pa.

766. DU PONT PEROXIDE BLEACHING SYSTEMS—New book illustrating and describing this continuous peroxide bleach system. Layouts and other information included.—E. I. DU PONT DE NEMOURS & CO., ELECTROCHEMICAL DEPT., Wilmington, Dela.

767. STYMER—Booklet describing the totally new sizing and finishing agent for rayons, cottons and wearlds.—MONSANTO CHEMICAL CO., St. Louis, Mo.

768. TEXTILE CHEMICALS—Buying guide and reference book giving facts about Amalgamated Products, the fabrics on which they give best results, their proper application, and their chemical composition.—AMALGAMATED CHEMICAL CORP., Philadelphia 34, Pa.

769. SURFACE TENSION DEPRESSANT — The Booklet, "Mercerizing and Alkamerce—The Ideal Dry Mercerizing Penetrant," introduces a new product which can be used as a wetting agent; a dye leveling agent, a penetrant in package dyeing.—HART PRODUCTS CORP., New York, N. Y.

770. SPECIAL FINISHES FOR SERVICE, PROTECTION AND APPEARANCE—Contains tabulated list under following categories: Water-Repellent, Waterproof, Absorbent, Antiseptic, Flameproofing, and Fireproofing, and Character Finishes, and Moth preventives. Trade names of 140 finishes listed.—UNITED STATES TESTING CO., Hoboken, N. J.

771. "STARCH STABILIZER" — Folder on Vagesta, a product used for textile sizing and printing, discussing stabilization and the results obtained. —R. T. VANDERBILT CO., New York 17, N. Y.

772. "STANDARD SILICATE ALKALIES"—Booklet descriptive of silicate and silicated alkalies and their uses. These uses include for silk weighting, in peroxide bleaching, boiling off cotton, textile finishing, etc. — DIAMOND ALKALI COMPANY, Cleveland, Ohio.

773. TTCHNICAL CHEMICAL DATA SHEETS—Complete set for dyeing, printing and finishing operations, showing major operations, performance and advantages.—ONYX OIL & CHEMICAL CO., Jersey City 2, N. J.

774. ROYCE TEXTILE CHEMICALS—This booklet briefly describes the leading Royce products for textile processing, printing, dyeing and finishing.— ROYCE CHEMICAL COMPANY, Carlton Hill, N. J.

KNITTING . . .

801. THE WILDMAN SINGLE-HEAD FULL-FASHIONED HOSIERY MACHINE — Literature on request from the WILDMAN MFG. CO., Full-Fashioned Division, Norristown, Pa.

802. THE TUBE-TEX FOR TUBULAR KNIT GOODS—Bulletin describing this modern machine which extracts, processes, dries, conditions and folds in one continuous operation, lowering costs, saving labor, power, space and waste.—H. W. BUTTERWORTH & SONS CO., Philadelphia, Pa.

809. TEXACO IN THE KNITTING INDUSTRY— Folder on knitting mill lubricants.—THE TEXAS CO., New York, N. Y.

811. CIRCULAR KNITTING MACHINES—Interesting, informative and well illustrated in this six-page folder, just released, which describes this company's small diameter circular knitting machine.— H. BRINTON COMPANY, Philadelphia 24, Pa.

813. THE NEW REINER HIGH SPEED TRICOT MACHINE—108" or 84" knitting widths. A richly illustrated catalog describing its many novel features of construction and performance. — ROBERT REINER, INC., Weehawken, N. J.

816. THE NEW REINER KAYLOOM—A combination Knitting Weaving Loom, featured in an illustrated catalog, showing filler attachment and other important points about this machine. — ROBERT REINER, INC., Weehawken, N. J.

817. AUTOMATIC SELECTIVE STRIPING MACHINE—Descriptive and illustrative folder, entitled "If It's Stripes, Consult Brinton," now available. Important mechanisms involved in this process are described.—H. BRINTON COMPANY, Philadelphia, Pennsylvania.

818. MILTON LIGHT METAL BEAMS FOR EVERY APPLICATION — Catalog 45-A describing Light Metal Tricot Beams made in Standard and Special sizes plus Special Purpose Light Metal Textile Equipment.—MILTON MACHINE WORKS, Milton, Pa.

820. VARIABLE STRIPES AND PLAIDS — Booklet describing Supreme Models SA and SA-ROF Stripers for knitting plaids, checks, "floatless" designs and variable stripes.—SUPREME KNITTING MACHINE CO., INC., Brooklyn 6, N. Y.

822. HIGH SPEED JERSEY CIRCULAR MACHINE—Completely illustrated brochure showing features and highlights of this 100 yard per hour producer. Also available—New Cylinder Chart — SUPREME KNITTING MACHINE CO., INC., 105 Johnson Ave., New York.

827. 50% GREATER PRODUCTION claimed for the same floor space on new RPM Plain Jersey Machine; illustrated folder. — H. BRINTON CO., Philadelphia 24, Pa.

828. THE KIDDE KNITTER—Bulletin describing the newest in Raschel-type warp knitting machines and the higher production rates attained with it.—KIDDE MANUFACTURING CO., INC., Bloomfield, N. J.

SEWING MACHINES . . .

909. "SUPERLOCK" OVERSEAMING MACHINE —Bulletin No. 838, describing the outstanding machine for overseaming, overedging, hemming and serging on a wide variety of fabrics.—WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

910. SPLIT TUBING MACHINE — Bulletin No. 811, describing improved regular Style 950-CDD2 for attaching split tubing to athletic shorts, lingerie, undergarments, etc.— WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

918. THE NEW UNION SPECIAL LOCKSTITCH MACHINE—Information of the new model which cuts production time on sewing operations is contained in Bulletin No. 255.—UNION SPECIAL MACHINE CO., Chicago 10, Ill.

MATERIALS HANDLING . . .

1001. HOW TO DETERMINE WHERE OVERHEAD MATERIALS HANDLING EQUIPMENT CAN BE USED PROFITABLY — Profusely illustrated. Gives clear, concise understanding of materials handling. Helps you to determine where and what equipment might be used to speed production and increase profits. — CLEVELAND TRAMRAIL DIV., Wickliffe, Ohio.

1002. CATALOG NO. 22—An attractive illustrated catalog describing in detail the Shamrock shipping containers and the new canvas trucks for textile use.—MEESE, INC., Madison, Ind.

1003. CASTERS AND WHEELS—192 pages, describing casters and wheels suitable for all types of industrial applications. Every mechanical engineer and purchasing agent should have this.—DARNELL CORP., LTD., Long Beach, Calif.

1004. LANE CANVAS BASKETS—14 page illustrated booklet describing the Lane line of canvas baskets for textile use.—W. T. LANE & BROTHERS, Poughkeepsie, N. Y.

1007. OVERHEAD HANDLING EQUIPMENT — 56 pages of illustrations showing successful applications of monorail systems to meet every kind of handling problem. — THE AMERICAN MONORAIL CO., Cleveland, Ohio.

1020. CONVEYORS—16-page booklet, No. 62, and entitled "Modern Time and Cost Savers," covers detailed information and illustrations on gravity rollers, wheel conveyors, supports, portable piling machines, belt conveyors, etc.—STANDARD CONVEYOR COMPANY, North St. Paul, Minn.

1022. CLEVELAND TRAMRAIL ENGINEERING AND APPLICATION DATA—Illustrated booklet with many photographs and sketches. Packed with valuable data. Covers briefly the various types of Cleveland Tramrail equipment. Delves into engineering details.—CLEVELAND TRAMRAIL DIV., Wickliffe, Ohio.

1025. CAB-OPERATED AND FLOOR-OPERATED ELECTRIC HOISTS—Bulletin No. 137 describing and illustrating electric hoists of various types and capacities. — SHEPARD NILES CRANE & HOIST CORP., Montour Falls, N. Y.

1026. NEVI-LIFT ELECTRIC HOISTS—Illustrated booklet describing the application of hoists ranging in capacity up to 15 tons in the textile industry. Gives suggested applications, detailed features and the 5-step variable speed full magnetic push-button control and seven types of mounting.—HARNISCHFEGER CORPORATION, Milwaukee 14, Wis.

1027. SINGLE BEAM CRANES—Bulletin No. 136 describing and illustrating the single beam type of overhead traveling cranes.—SHEPARD NILES CRANE AND HOIST CORP., Montour Falls, N. Y.

1028. TRAV-LIFT CRANES—Bulletin H13-1 describing P H overhead traveling crane service.— HARNISCHFEGER CORP., Milwaukee 14, Wis.

1030. C-D HOLLOW WARE—This 32-page catalog, HW44, profusely illustrated in color, shows Continental-Diamond's line of boxes, trucks, cans, barrels, baskets and trays. Complete description and specification is given on each item.—CONTINENTAL-DIAMOND FIBRE CO., Newark 38, N. J.

MISCELLANEOUS . . .

1103. UNBRAKO SCREWS — Illustrated 16-page booklet No. 670 gives data on Unbrako hollow set screws, with knurled point, self-locking features. Includes miscellaneous screw and locking nut data.— STANDARD PRESSED STEEL CO., Jenkintown, Pa.

1104. INTERPRETATION OF ANALYSIS. In compiling this brief collection of terms which most frequently appear in analysis of surface active chemicals, an attempt has been made to explain as clearly as possible the meaning of these terms to those who have had little or no chemical training. —NOPCO CHEMICAL CO., Harrison, N. J.

1105. MILL NOTES—This is a mimeographed six-page pamphlet published every month containing information on new developments in process manufacturing and testing of interest to woolen and cotton mills. Mailed free to interested readers on request.— UNITED STATES TESTING CO., Hoboken, N. J.

1106. ILLUMINATED MAGNIFIER — A folder showing how Pike Flash-O-Lens is used in textile inspection; illustrated to show various models including the Pike Master Magnifier Set. — E. W. PIKE CO., Elizabeth, N. J.

1108. FABRICATION OF U. S. STAINLESS STEELS—136 page book covering use of stainless steel in textile equipment from cutting to cleaning. Includes corrosion-resistance table for chemicals.— CARNEGIE - ILLINOIS STEEL CORPORATION, Pittsburgh, Penn.

1109. PEERLESS FIRE PUMP—Bulletin No. B-152 illustrates both horizontal and vertical pumps for every water handling service.—PEERLESS PUMP DIV., FOOD MACHINERY CORPORATION, Los Angeles 31, Calif.

1110. DENNISON MACHINE TOOLS — 24-page catalog available which lists and illustrates this manufacturer's complete line of machine tools. Prices are included.—DENNISON MACHINE TOOL CO., INC., Hickory, N. C.

1111. BRUSHES—A 36-page booklet is now available which describes and illustrates this manufacturer's line of brushes for the textile industry.— GASTONIA BRUSH COMPANY, Gastonia, N. C.

1112. "LIGHT DUTY-LOW AIR METALLIZING GUN—Bulletin 55 describes and illustrates the economical operating features of this new metallizing gun. Operates on only 10 cu. ft. of air per minute— sprays all metals.—METALLIZING ENGINEERING COMPANY, INC., Long Island City, N. Y.

1113. FLUORESCENT INSPECTION UNIT—Data available which describes this new fixture, which employs fluorescent lamps behind a diffusing panel of fleshed opal glass, with details of construction, advantages and complete specifications. — SALEM MANUFACTURING CO., Salem, Mass.

TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga.

Please send me, without obligation, free booklets or further information on New Equipment items described in the January 1949 issue of TEXTILE INDUSTRIES.

(Fill in here numbers you select from items in this issue) . . . . . .

. . . . . .

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Name . . . . . .

Firm Name . . . . . Position . . . . . .

City and State . . . . . .

Street . . . . . .

PERSONAL NOTES

ABOUT MEN YOU KNOW

George H. Turner, former general overseer carding at Republic Cotton Mills, Great Falls, S. C., has joined Gibson Yarn & Weave Mills, Dallas, N. C., in a similar capacity.

W. W. Aultman, former general superintendent and production manager of the Newberry (S. C.) Textile Mills, has accepted a position with Sellers Mfg. Co., as general superintendent of the Jordan Plant, Cedar Falls, N. C.; the Royal Plant, Wake Forest, N. C.; and the Saxapahaw (N. C.) Plant, with general offices at Saxapahaw.

Arthur T. Branigan, former assistant agent, has been appointed agent of Kerr Mills of The American

Mr. Branigan

Thread Co., succeeding **W. W. McLeod,** who has joined Chicopee Mfg. Corp., Chicopee Falls, Mass., as vice-president in charge of manufacturing.

D. S. Hamby, formerly associated with the B. F. Goodrich Co., has accepted the position of assistant professor in the yarn manufacturing department at the Textile School, North Carolina State College, Raleigh, N. C.

Stanley West Sullivan, former general manager of Knox Products, Inc., has been appointed director of promotion for the Textile Bag Manufacturers Association.

The National Heavy Outerwear Association has elected **Robert L. Smith** of United Sheeplined Clothing Co., Long Beach, N. J., as president, succeeding **Eugene H. Mahler,** Monarch Mfg. Co., Milwaukee, Wis. Mr. Mahler has been made chairman of the board.

A. A. Wright, vice-president of Deering Milliken & Co., Inc., has been placed at the head of the sheetings, drills and twills department.

Gordon B. Carr, former manager of the general merchandise department of Singer Sewing Machine Co., has been appointed executive vice-president of E-Z Thread Co., Inc.

Brookside Mills, Knoxville, Tenn., have made the following personnel changes: **Stanley Jessiman** has replaced **Arthur L. Emery,** resigned, as vice-president and general manager; **S. M. Ledford** has been promoted from cashier and office manager to the newly created post of comptroller; **Norman Garlington,** former production manager, a position which has been discontinued, is now general superintendent, succeeding **John W. Card; Thomas Epstein** is the new secretary-treasurer.

Directors of the Wilson Sales Corporation, cotton firm in Gastonia, N. C., have elected **Arthur K. Winget,** president of Efird Mfg. Co., Albemarle, N. C., as president of the corporation succeeding the late **Brown W. Wilson. R. S. Dickson,** former vice-president of the firm, and president of American Yarn & Processing Co, Mount Holly, N. C., was named chairman of the board.

George W. Felker, III, formerly associated with Dan River Mills, Inc., has joined Southeastern Cotton, Inc.,

Mr. Felker

New York, N. Y., and will devote his time and efforts to product development.

William H. Jones has resigned as vice-president of the Railway Supply and Manufacturing Co., Cincinnati,

Manufactured and Serviced by
STODGHILL and COMPANY
ATLANTA GEORGIA
"The Size That Satisfies"
SUPERTAL

check these lists of
Textile Machinery *then*

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Long Draft Slubbers
Abbott Winding
Wide Gauge Twisters

Combers
Spinning
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Looms
Finishing Equipment

Comer connections reach into every great Textile Center. To buy or to sell Textile Machinery—it's sure . . . it's quick . . . it's profitable . . . to CONTACT COMER!

Call, Write or Cable Comer Today

"SALES AROUND THE WORLD"

COMER MACHINERY COMPANY

Cable Address: COMACH

308 Ivy Street, N. E. — Atlanta, Georgia, U.S.A.

Ohio. Mr. Jones has not as yet announced his plans for the future.

J. Harold Lineberger has been elected president of South Fork Mfg. Co., succeeding his father, the late **A. C. Lineberger, Sr.** Replacing his father on the board of directors is **Henry A. Lineberger.**

A. B. Davis, formerly with the Worumbo Mills, Lisbon Falls, Maine, and before that with the Winthrop (Me.) Mills, is now boss carder at Dudley (Mass.) Woolen Mills.

Carroll F. Holt, former tax man with the Boston office of Price Waterhouse & Co., certified public accountants, is now assistant treasurer of Fitchburg (Mass.) Yarn Mills, succeeding the late **E. M. Hanson.**

Alfred Greenfield, former superintendent of the Guilford (Me.) Woolen Mills and Sangerville (Me.) Woolen Mills, has become assistant general manager of the M. T. Stevens Company.

Paul Bonsaint, formerly with the Amoskeag-Lawrence Mills, Manchester, N. H., is now overseer of weaving at the Grosvenor-Dale (Conn.) Company.

J. Warnke, former vice-president and superintendent of Neponset Woolen Mills, Canton, Mass., has become superintendent of the Webster (Mass.) Mills of the American Woolen Co.

Harold R. LaTour, former superintendent of weaving at Ashland Corp., Jewett City, Conn., has joined Paul Whitin Mfg. Co., Northbridge, Mass., in a similar capacity.

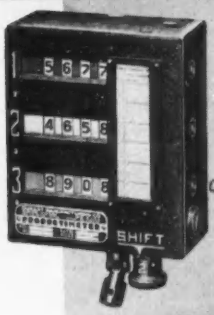
Olin D. Gay, president of Gay Brothers Woolen Mill, Cavendish, Vt., has been elected president of Vermont Associated Industries succeeding **James F. Dewey,** president of A. G. Dewey & Co., Quechee, Vt.

William F. Atwood, formerly with Textron Inc., at Nashua, N. H., is now associated with Dr. Roy Herrmann, New York management consultant.

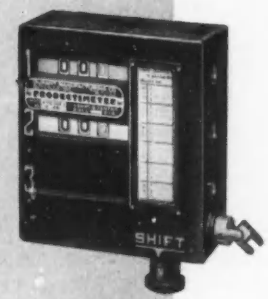
William Cross, former overseer of weaving at the Warwick Mills, West Warwick, R. I., has become manager of the newly organized Greyeagle Mills, which operates on the ground floor of the former Butler Mills building in New Bedford, Mass.

R. Timothy Gibson, formerly with Raytex Dyers and Finishers, now manages the rayon division of Lincoln Bleachery & Dye Works in the New York office.

PRODUCTIMETER
TEXTILE COUNTERS
for every application!



3-SHIFT PICK COUNTER



2-SHIFT HANK COUNTER

LINEAL COUNTER

ROTARY COUNTER

Productimeters meet every need of the mill man in providing accurate production records. They eliminate losses... help maintain maximum production... and supply an accurate basis for wage payment.

Send for Catalog No. 50

DURANT MFG. CO.
1973 N. Buffum St. Milwaukee 1, Wis.
173 Orange St. Providence 3, R. I.
Representatives in Principal Cities

PRODUCTIMETERS
SINCE 1879 *Speedometers* OF INDUSTRY

"Look! I can walk again"
Join the MARCH OF DIMES
JANUARY 14-31
FIGHT INFANTILE PARALYSIS
THE NATIONAL FOUNDATION FOR INFANTILE PARALYSIS

Arthur Hubert, former overseer of finishing with the Hayward-Schuster Mills, Millbury, Mass., has joined the Morschner Dye Works, Newton Upper Falls, Mass., in a similar capacity.

Frank D. Cheney is now chairman of the board of Cheney Brothers, Manchester, Conn., succeeding the late **Clifford D. Cheney.**

Richard W. Powell, former superintendent of the Lincoln Bleachery and Dye Works, Lonsdale, R. I., is now production manager of the Verney Corp. finishing plant at West Peterborough, N. H.

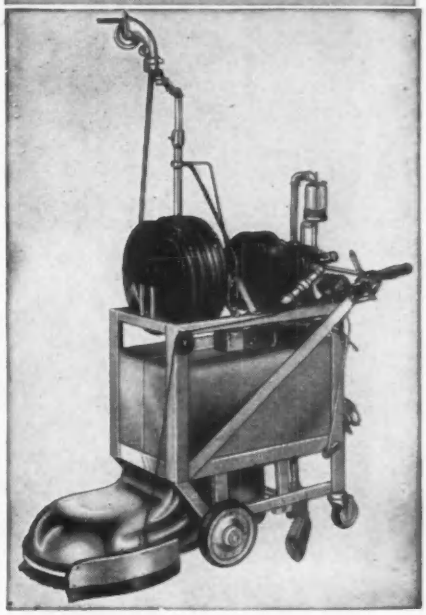
Charles L. Tidwell, former superintendent of the throwing room, has been promoted to general superintendent of Dunean Mills, division of J. P. Stevens & Co. in Greenville, S. C. He succeeds the late **Joseph C. McCall.**

Raymond L. Swetenberg, in charge of manufacturing operations for the Walhalla, S. C., plant of the Chicopee Mfg. Corp., has been made vice-president in charge of manufacturing at the Gainesville and Walhalla plants.

Joe L. Lanier, executive vice-president of West Point (Ga.) Mfg. Co., has been elected president of the Lanett (Ala.) Bleachery and Dye Works, succeeding his father, the late **George H. Lanier.** He also has been named president of the Dixie Cotton Mills, LaGrange, Ga.

Lindsey Mason, of S & M Dye Works, has been elected president of the Philadelphia Textile Manufacturers Association. He succeeds **Rinaldo A. Lukens,** of Continental Mills. **Alfred A. Forster,** of Clifton Yarn Mills, was made a vice-presi-

SCRUBS and SQUEEGEES FLOORS



LAWLOR 20-D

DOES BOTH JOBS

Only one operator is required to run this remarkable two-in-one machine. Clean water is fed from one tank upon the soaped floor, the 19" diameter revolving brush scrubs it quickly and thoroughly. Then a rubber squeegee mops up the dirty water which is vacuum pumped into a second tank.

JUST THE THING FOR LARGE AREAS

The Lawlor 20-D is only 22" wide and can be used in congested places around machines, counters and desks. Available for either AC or DC current.

MOP WRINGERS

All steel with perforated rolls. Easy foot-lever operation. Made for one or two pails.

MOPPING TANKS

Heavy galvanized steel with welded seams. Two compartments, each with shut-off. Foot pressure wringers. 30 or 60-gallon capacity.

SCRUBBERS and POLISHERS

12 different styles and sizes, a right size for every need. Your choice of Tampico, Palmetto or Steel Wire brushes.

Lawlor Equipment is sold and serviced by local Janitor Supply Houses.

Write for Catalog giving description on the complete line

S. C. LAWLOR CO.
Makers of Quality Equipment for 50 Years
121 N. Aberdeen St., Chicago 7, Ill.

SAYS
A TEXTILE
PRINTER

"I LIKE ...
METLKOR* FURNISHER BRUSHES
... They last months longer"

A leading printer (name on request) says, *"Prior to using Jenkins' 'Metlkor' nylon bristle brushes, we used wooden furnisher brushes. Then we got a sample Jenkins' brush. It far outlasted our old brushes. We used to buy a dozen wooden brushes every few weeks. We haven't had to replace a Jenkins' 'Metlkor' brush in months."*

You, too, will find you get longer brush life, and save money in many other ways when you use Jenkins' "Metlkor" brushes.

"Metlkor" Furnisher Brushes, Blanket Washing Brushes, Shearing and Brushing Machine Brushes, Pressing and Carding Machine Brushes and all others for textile use.

Write today for fully illustrated catalog of Jenkins' "Metlkor" nylon, fibre or china Bristle Brushes.

*Reg. U. S. Pat. Off.

M. W. JENKINS' SONS, INC.
Manufacturers of Industrial Brushes Since 1877
CEDAR GROVE, ESSEX COUNTY, NEW JERSEY

dent. Those named to the board of directors are: **John J. Hosey,** Energetic Worsted Co.; **Harry Benedict,** H. H. Benedict Co.; **H. T. Greenwood, Jr.,** Globe Dye Works, and **Walter E. Hulton,** W. E. Hulton Dyeing Co.

Obituaries

Charles C. Harding, 58, president of Piedmont Silk Mills, Dobson, N. C., and of Piedmont Throwing Mill, Dobson, passed away recently in the Martin Memorial Hospital, Mount Airy, N. C., from injuries suffered in an automobile accident.

Henry C. Dresser, 76, manager of more than ten southern mills for the G. E. Huggins enterprises of New York, died in Boston, Mass., recently.

Joseph C. McCall, general superintendent of Dunean Mills, Greenville, S. C., died in a Greenville hospital recently following an illness of three weeks.

Frank H. Naylor, 71, vice-president of Jordan Mills, Inc., Columbus, Ga., passed away recently after a three-months' illness.

Horace B. Davis, 45, superintendent of Converse Mills, Spartanburg, S. C., died at a hospital in Spartanburg recently.

George Duquette, 65, sales representative for Heathcote Hosiery Co., New York, N. Y., died of a heart attack at his home in Lincoln Park N. J., recently.

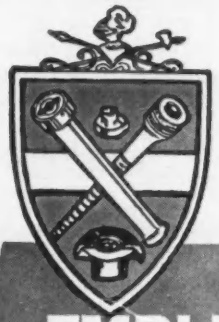
Albert Cullen Hewitt, 68, president of Hewitt Hosiery Mills and Consolidated Hosiery Mills, Marion, N. C., died recently in a Morganton, N. C., hospital.

John A. Larkin, 57, vice-chairman of the Celanese Corp. of America, died suddenly at his home in New York City recently.

Frank C. Roberts, 57 year old superintendent of the Pauline plant of Neisler Mills, Inc., Kings Mountain, N. C., died in Gastonia, N. C., a few hours following a heart attack.

John Maffitt Miller, Jr., 80, chairman of the board of Riverside and Dan River Mills, died at his home in Richmond, Va., after a long illness.

Frank D. Jacoway, sales engineer for many years for the New York & New Jersey Lubricant Co., passed away on December 9 in Atlanta, Ga.



The EMBLEM OF QUALITY METAL SHIELDS

For Spools and Bobbins

Anderson Shields are dependable protection against chipping, splitting, and breaking of spools, bobbins, and paper caps. Even the most minute details are carefully worked out to make Anderson the highest in precision, the smoothest in finish, the best in performance. The Anderson Emblem is your assurance of the finest shields you can buy.

Insist on Anderson when you order metal shields.

TEXTILE SHIELD CO., INC.

J. N. ANDERSON, Treasurer

LAWRENCE, MASS., U. S. A.

SUPPLIERS' NEWS

WHAT THEY ARE DOING

Airmatic Valve, Inc., Cleveland, Ohio, has announced the appointment of the **Nilsen Engineering Co.,** Salem, Mass., as exclusive representatives in the six New England states.

A new distributor for the **Alleghe-ny Steel Band Company** has begun operations near Carnegie, Pa., for the manufacture of Steelband strapping, Steelband seals, tensioners, and sealers, along with other accessories, for use in banding packages, bales, boxes, bundles, and pallets.

Industrial Rayon Corporation, Cleveland, Ohio, has declared an extra dividend of five per cent, payable in stock, in order to conserve cash which will be required to meet future expansion plans. Industrial Rayon has also announced the election of Hiram S. Rivitz, former president, as chairman of the board. Hayden B. Kline, former executive vice-president, will succeed Mr. Rivitz as president.

Mr. Rivitz

Mr. Kline

W. L. Manly, former manager of the water conditioning department, has been appointed manager of dealer sales of the **Allis-Chalmers Mfg. Co.** He succeeds W. A. Meyer who has been named assistant manager of the texrope drive department.

The **Industrial Research Institute** of the University of Chattanooga, Tenn., has announced the appointment of J. Horace Couliette as technical director and Irvine W. Grote, as administrative advisor.

American Viscose Corporation's Philadelphia district sales office has been moved to the main office in the Broad Street Station building.

A New and Better Size

Moretex 3S*

A Stable Mix

Moretex 3S is a purely synthetic product which combines chemically with any starch and forms a size mix of stable viscosity.

A Better Mix

Moretex 3S produces uniform sizing, better adhesion, and stronger film. Its use results in smoother yarn, reduced shedding, and better loom efficiency.

Easily Washed Out

Moretex 3S is water soluble and is easily removed by hot water washing.

*Developed and produced by Moreland Chemical Company — Specialists in sizing for over 40 years. Trade Mark applied for.

Moreland Chemical Company Incorporated

Spartanburg, S.C.

A SERIES of comparative runs with soap and Onyxol 9162 was recently made at the Lowell Textile Institute. Subsequenty a mill run of 53,000 lbs. of wool was scoured with this new synthetic detergent.

Results of both tests indicate that Onyxol 9162 is superior to soap in production . . . in cost . . . and in quality of scoured wool.

You can study these comparative tests and come to your own conclusions by reading Onyx Technical Report No. 19-T.

Write for this report now. If you also want the Onyx Technical Data Sheet outlining the properties and characteristics of Onyxol 9162, ask for Data Sheet No. 21-T as well.

ONYX OIL & CHEMICAL COMPANY
JERSEY CITY 2, N. J.
CHICAGO • PROVIDENCE • CHARLOTTE • ATLANTA
In Canada: Onyx Oil & Chemical Co., Ltd., Montreal, Toronto, St. Johns, Que.
For Export: Onyx International, Jersey City 2, N. J.

onyx
CHEMICALS FOR WOOL PROCESSING

Westinghouse Electric Corp., Pittsburgh, Pa., has elected A. C. Monteith, engineering executive, as vice-president in charge of engineering and research. Mr. Monteith succeeds Marvin W. Smith who has joined Baldwin Locomotive Works as executive vice-president.

A. E. Staley Mfg. Co., Decatur, Ill., has announced the following promotions and organization shifts: W. R. Boyer, former assistant treasurer, is now comptroller; R. C. Scherer, former comptroller, continues as secretary, director and member of the executive committee, and additional duties; and E. E. Rhodes has been promoted as assistant treasurer.

G. L. Harman, Jr., formerly associated with the Los Angeles office, has been appointed manager of the Milwaukee branch office of the **Bailey Meter Co.,** Cleveland, Ohio. He replaces R. V. Knapp, who has joined the Mosinee Paper Mills Co., Inc.

The Universal Winding Co., Providence, R. I., has executed the following changes: John Breen, of the Atwood division, is now located in the Philadelphia, Pa., office; Edward C. Parish, Jr., has been transferred from Boston sales office to assist in Philadelphia; and Dudley M. Dunlop replaces Mr. Parish in Boston.

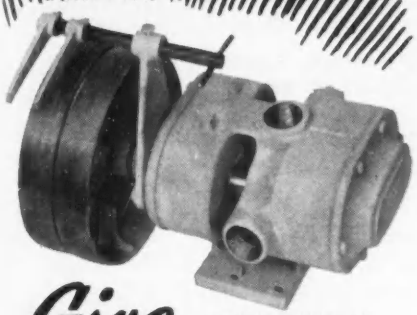
Frank W. Thomas, Jr., has been named assistant general manager of sales of **Mathieson Chemical Corp.,** and will be located in New York. His sales activities will be in connection with the company's specialty products. Thomas S. Nichols has been elected chairman of the board succeeding the late George W. Dolan. J. C. Leppart, vice-president, has been made a member of the board.

Dr. Clarence W. Winchell, former chief of the Bureau of Standards of New Jersey, has become associated with the staff of the **United States Testing Co., Inc.,** Hoboken, N. J. He will be in charge of preparing specifications and standardization for official purchasing commissions and institutions, developing sources of materials and testing these materials for specific uses.

James B. Irwin, Jr., former supervisor of the chlorine department at the Monsanto, Ill., plant, has been made assistant to the president of **Monsanto Chemical Co.,** St. Louis, Mo. He succeeds R. U. Haslanger, who is now assistant to the general

WATEROUS PUMPS

FOR PUMPING SIZE TO YOUR SLASHERS



Give EXTREMELY SATISFACTORY SERVICE

Waterous pumps are positive rotary type. Because of the crescent shape rotors there is no metal-to-metal contact within their pumping chambers. It's a simple, efficient design and construction that means long life, dependable performance and satisfactory service.

POSITIVE ROTARY TYPE

Illustrated is the tight and loose pulley model. Capacities from 5 to 150 G.P.M. Waterous pumps are now successfully pumping size to slashers in many textile mills throughout the country.

LOW COST OPERATION

In Waterous pumps are rigid bearings, spring loaded seals and inverted rotor hub. All bearings and timing gears run in oil to assure continuous lubrication of the pump without contamination of the size and the pump lubrication.

NO JAMMING OR CLOGGING

Shaft leakage and shaft friction are reduced to a minimum by the pumps being equipped with spring loaded seals. Waterous pumps have positive volume control, self-priming and constant delivery, without agitation within the pumps.

NO METAL-TO-METAL CONTACT

SPRING LOADED SEALS

NO SHAFT LEAKAGE

NO CONTAMINATION OF SIZE

Waterous Pumps ARE AVAILABLE in Stainless Steel.

Write for complete information today.

DESIGNED AND MANUFACTURED BY EXPERIENCED *Engineers*

WATEROUS COMPANY
ST. PAUL 1, MINN.

Waterous Dependable
SINCE 1886

manager of the western division at Seattle, Wash. Monsanto's plant in Springfield, Mass., has announced the division of the industrial and surface coating resins sales department into two groups. One, the adhesives and industrial resins department, will be headed by E. Everett Decker, former district manager at Lockport, N. Y., for Monsanto's western division. Assisting him will be Edmund S. Bauer, Jr., former assistant sales manager of the industrial and surface coatings resins sales department. Albert W. Dunning will continue as sales manager of the surface coatings resins department, assisted by William C. Davis, former member of the sales development department.

The **Diamond Alkali Co.**, Cleveland, Ohio, has named J. C. McKenna, former product manager of chromium chemical sales, as product manager of alkali sales. He succeeds J. D. Mattern, retired.

J. Paul Laird has been made sales representative for the northeastern states and Canada by the textile division of **Hayes Industries, Inc.**, Jackson, Mich., to promote the sale of light metal loom beams, section beams and tricot beams.

Mr. Laird

Saco-Lowell Shops have taken over the building and property of The Edwards Company, Sanford, N. C., and will use the facilities to produce textile machinery, under the name of Edwards Division of Saco-Lowell. Employment is expected to be approximately 1,000 when production is at its height.

George N. Lilygren, comptroller, has been elected a vice-preisdent of **Carrier Corp.**, Syracuse, N. Y.

E. I. du Pont de Nemours & Co., Wilmington, Del., has plans maturing for a mill near Camden, S. C., for the manufacture of a recently developed synthetic textile fiber,

QUALITY RICHMOND PRODUCTS

NO. 10 OF A SERIES

FOR BETTER UNIONS

of monofil and multifilament yarns.

FOR MORE EVEN DYEINGS

USE

DYNYL-P

Originally Two Products

DYNYL-A for acetates
DYNYL-W for Ny dyes

NOW ONE PRODUCT

DYNYL-P does the whole job!
DYNYL-P is very effective in dyeing spun nylon.

USE OF DYNYL

Directions for dyeing 15 denier hosiery. All percentages based on the weight of the goods:

DYNYL—For Acetate Colors

Scour first as usual.
Make a fresh bath.
Add 7 to 8% of DYNYL.
Add 1% of SCOURTEX.
Dye at 150 to 160 degrees as usual.

DYNYL—For NY Dyes

Scour as usual.
Give two thorough rinses.
Add 7 to 8% of DYNYL.
Dye as usual.

Samples and Detailed Information Upon Request

Southern Office
617 Johnston Bldg., Charlotte, N. C.
Charlotte 2-1428

RICHMOND OIL, SOAP & CHEMICAL CO., Inc.
1041-43 FRANKFORD AVE.
PHILADELPHIA 25, PA.

DIAMOND ALKALI'S NEW CHLORINE-CAUSTIC SODA PLANT

Aerial view of new electrochemical plant of Diamond Alkali Company at Pasadena, Texas. Occupying a 325-acre tract 25 miles from Houston along the ship channel, this $14,500,000 plant is designed to produce 220 tons of liquid chlorine and 240 tons of caustic soda per day. Hydrochloric acid and perchlorethylene are other products Diamond will make in this plant.

known as Orlon. The project will comprise a number of buildings and represent a large investment.

Henry Gifford, formerly on the sales staff of Allied Chemical and Dye Corporation, has joined the heavy chemical sales division of **Mathieson Chemical Corporation.** He will cover Tennessee and adjoining states, with headquarters in Chattanooga.

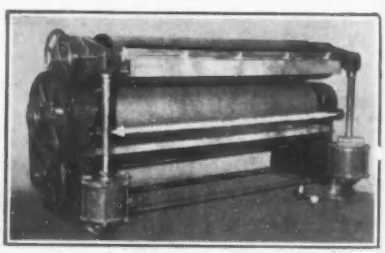
American Bemberg Corp., Elizabethton, Tenn., rayon fabrics, has authorized an expansion and improvement program at the mill. This will include additional buildings and the installation of machinery and facilities to convert the plant for operation under a new continuous process, which was recently perfected by the company. The entire project will cost about $2,500,000.

Fritz Zweifel, formerly associated with H & B American Machine Co., Pawtucket, R. I., has become sales engineer for the **Arlind Corporation,** New York, N. Y.

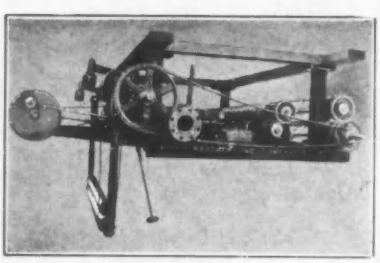
American Aniline Products, Inc., New York, N. Y., has announced the opening of its new and larger offices at 50 Union Square, New York City.

The Manhattan Rubber Division of **Raybestos-Manhattan, Inc.,** Passiac, N. J., has announced the completion of its 55th year.

General Electric's rolling "Carnival of Measurements" featuring "Instruments in Industry" has embarked on a year-long, 14,000-mile tour of



New Pneumatic Pressure Roller Bearing Squeeze Roll Extracting Unit. Pressure 30,000 lbs. Machine fitted with Flock Brush, Stainless Steel Pan to catch flocks, and Stainless Steel Drip Pan. Drive supplied either Constant Speed or Variable Speed with 5 HP or 7½ HP Motor.



Heavy Duty
All Ball Bearing
CLOTH OPENING
and
FOLDING MACHINE
with
Vacuum Extractor

All Drives by Cut Gears or Roller Chain. Drive by Built-in Motor, for opening and extracting woolens, worsteds, plushes, cottons and rayons. Excellent extraction.

BIRCH TREE.

BIRCH BROTHERS, Inc.

Harold W. Birch Clifford W. Birch Clifford W. Birch, Jr.

SOMERVILLE 43, MASS.

Dyeing and Finishing Machinery and Mill Sewing Machines

Southern Representative
JOHN C. COSBY, Greenville, S. C.

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Red Cap

SODIUM SULPHIDE FLAKES

The analytical laboratory of a very large rayon manufacturer reported, "We examined your sodium sulphide for metallic impurities by means of the spectograph which showed it to be remarkably free from the metallic impurities which would normally be expected to be present."

The constant vigilance of our control chemists insures to you a sodium sulphide that consistently meets the most exacting specifications of the industries we serve. USE our sodium sulphide to maintain more easily your high standard of quality.

BARIUM REDUCTION CORPORATION

SOUTH CHARLESTON 3, W. VA.

80 major U. S. industrial centers.

Lestershire Spool and Mfg. Co., Johnson City, N. Y., has appointed Joseph H. Windle, Jr., former southern representative for the Whitinsville Ring Spinning Co., as New England representative. Mr. Windle succeeds the late Frank Steere.

The **Charlotte (N. C.) Chemical Laboratories, Inc.,** has announced the addition of two members to its staff: Robert B. Murdoch, formerly with the National Aniline Division of Allied Chemical and Dye Corp., succeeds the late Peter S. Gilchrist as vice-president to direct the sale of textile chemical specialties; John W. Robertson, former chemical director of the Pendleton, S. C., plant of La-France Industries, has joined the company in the capacity of technician and will do research and development work in textile chemicals.

Charles L. Haslup has been appointed sales manager of field operations for the Reading-Pratt & Cady division of **American Chain & Cable Co.,** Bridgeport, Conn. He will make his headquarters in Reading, Pa.

Goodyear Tire & Rubber Company's mechanical goods division, Akron, Ohio, has selected Norman W. Gilbert to fill the new post of

Mr. Gilbert

head of fractional horsepower and replacement V-belt sales.

The **American Cyanamid Co.,** Bound Brook, N. J., has made the following appointments: R. H. Drukker is sales manager of the Philadelphia territory for the textile resin department; T. B. Spence, formerly located at Bound Brook, will work under Mr. Drukker, and D. G. Zachary has been assigned to the metropolitan territory.

William A. McCready has become a member of the central area sales force for the industrial division of **Nopco Chemical Co.,** Harrison, N. J. Prior to this appointment he spent

MILTON

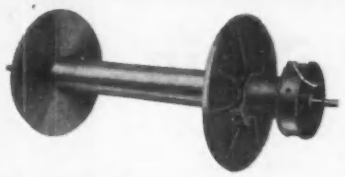
A TIME TESTED LINE

Engineered for Production

MILTON WARP BEAMS

for BROAD, NARROW FABRIC, RIBBON, VELVET, CARPET LOOMS

BROADLOOM BEAMS



For C & K Looms (pictured) and Draper Looms (with let-off gear). Steel barrels, cast iron flanges.

RIBBON LOOM BEAMS

Steel barrels, with your choice of adjustable head and fixed shaft (pictured) or fixed head with removable shaft.

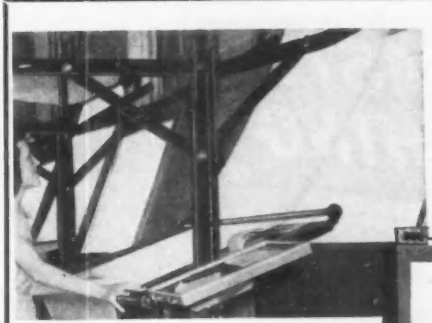
GET THE COMPLETE STORY

Write for Catalog 45 (Steel) or Catalog 45-A (Light Metal)

MILTON MACHINE WORKS, INC.

DESIGNERS · ENGINEERS · MANUFACTURERS

MILTON, PENNA.



Inspection is

More THOROUGH

EASIER

With LESS LABOR

In LESS TIME!

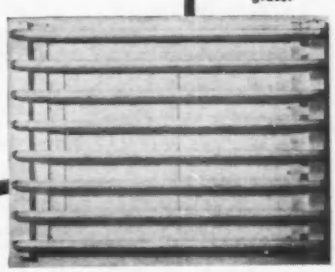
Panel with diffusing glass.

Inspection Fixture

with cool, evenly distributed daylight quality

Fluorescent Light

Eight Fluorescent Lamps.



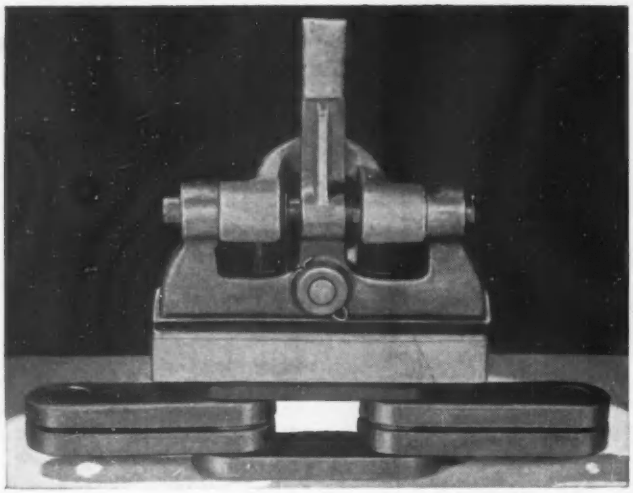
A strong, durable cabinet into which are set eight 40-watt fluorescent lamps behind a diffusing glass panel*. Ample and evenly distributed light of daylight quality—not hot or glaring—permits careful, comfortable inspection of every square inch of cloth. Better than daylight, incandescent or mercury vapor because the light is cool, diffused and evenly distributed over the entire width of the cloth.

*Or in a larger size with eight 72" Slimline Fluorescent Lamps.

Salem *Manufacturing* Company

Tel. 0446 4 Jefferson Avenue, SALEM, Massachusetts

MAKERS OF FLUORESCENT AND INCANDESCENT LIGHTING FIXTURES AND WIRING DEVICES



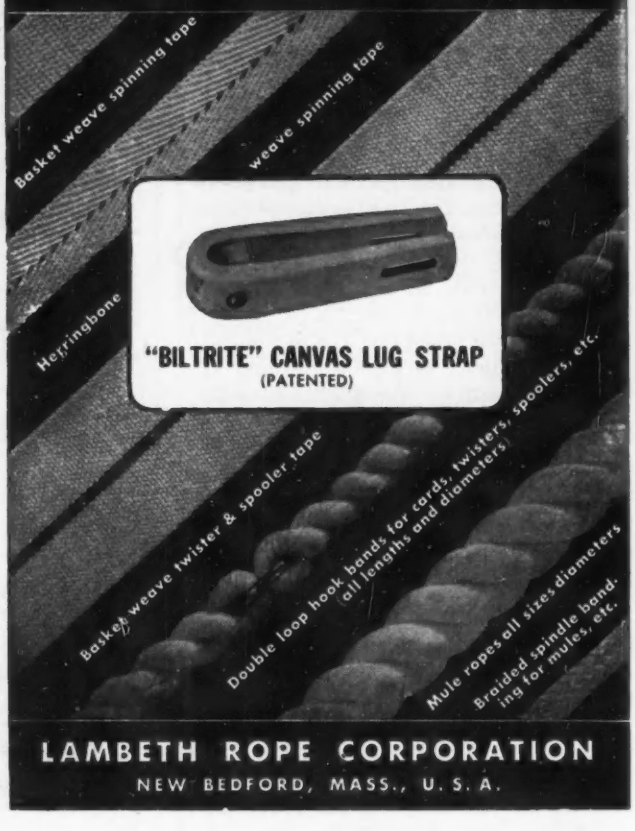
Tough Tenter Chain

Now you can get faster tenter speeds with the new Butterworth "43" Chain. This 2" pitch chain practically eliminates vibration even at high speeds. Hardened steel construction. Minimizes impact loads and strains. Quick replacement of damaged clamps by removing single bolt.

H. W. BUTTERWORTH & SONS COMPANY
Serving the Textile Industry Since 1820
Main Office and Works: Philadelphia 25, Pa.

Butterworth

LAMBETH PRODUCTS
FOR SPINNING, TWISTING, SPOOLING, WEAVING


Basket weave spinning tape
weave spinning tape
Herringbone
"BILTRITE" CANVAS LUG STRAP
(PATENTED)
Basket weave twister & spooler tape
Double loop hook bands for cards, twisters, spoolers, etc. all lengths and diameters
Mule ropes all sizes diameters
Braided spindle banding for mules, etc.

LAMBETH ROPE CORPORATION
NEW BEDFORD, MASS., U. S. A.

10 TIMES FASTER THAN STITCHING!

SPINDLE TAPE LACING EQUIPMENT

Lace spindle tapes 10 times faster with Clipper No. 25 Spindle Tape Hooks. Tapes can be prepared in advance so frame is shut down only long enough to place new tape on the pulleys and join ends with connecting pin. Tapes run true—last longer—run smoother—require less tension—VIBRATION IS ELIMINATED

CONDENSER TAPE LACING EQUIPMENT

Lace condenser tapes with Clipper No. 25 Condenser Tape Hooks. Clipper laced tapes, prepared in advance, can be installed in a fraction of the time required for endless tapes. Tape may be purchased in the roll at considerable saving.

CLIPPER BELT LACER COMPANY, GRAND RAPIDS 2, MICHIGAN

Clipper BELT LACING EQUIPMENT

Make it *easy* for your workers to move materials—and you take a big step toward lower handling costs. That's one of the reasons why it pays to use boxes, cans and other receptacles made from *Diamond Fibre.* This durable material weighs only ½ as much as aluminum—yet is plenty strong for long, hard use! It will not readily crack, splinter, or shatter. Its smooth, tough finish makes it safe for handling anything from fine fabrics—to steel products. For faster, *easier* materials handling, write for Catalog HW-46, today.

C-D DIAMOND FIBRE HOLLOW WARE
CONTINENTAL-DIAMOND FIBRE CO., NEWARK 11, DEL.

MARCH OF DIMES

FIGHT INFANTILE PARALYSIS

JANUARY 14-31

several years in the company's laboratories in Harrison, specializing in product application and customer service problems and techniques.

The **Takk Corporation,** Newark, Ohio, has announced the appointment of the following firms to represent them in the textile field: The John Fensom Co., Richmond, Va.; Mahon & Bone Co., Greensboro, N. C.; Black & Easley, Greenville, S. C.; Wm. P. Russell, Atlanta, Ga.; Fawcett & Co., Toronto, Canada; Richard H. McKee, Buffalo, N. Y. Qualified technicians of these firms have just completed a training course encompassing the latest techniques of static control and its elimination on textile machinery, the announcement said.

Joe L. Comer, formerly engaged in general sales and trade relations with the Crane Company, has become vice-president in charge of sales in the New York area for the **Wm. Powell Co.,** Cincinnati, Ohio.

The **Institute of Textile Technology,** Charlottesville, Va., has employed as library cataloger, Miss Mary Emerson, formerly with the New York Public Library and the library of the City College of New York.

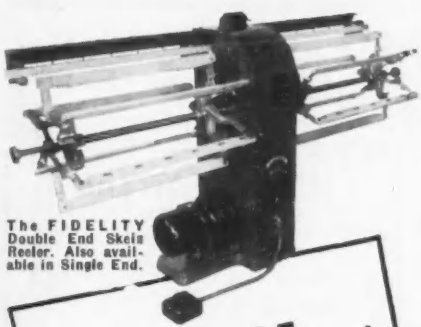
H. W. Butterworth & Sons Co., Philadelphia, Pa., is building 30 rayon spinning machines for the **National Rayon Corp.** of Bombay, India.

The **Cooper Alloy Foundry Co.,** Hillside, N. J., has announced the coordination of all advertising, publicity and public relations activity under the direction of George Black,

Mr. Black

public relations division manager. Mr. Black formerly was associated with the nickel sales division of The International Nickel Co.

Quaker Chemical Products Corp., Conshohocken, Pa., has announced the appointment of E. Taylor Mobley, formerly with the General Dyestuffs Corp., to its staff of technical representatives.



The FIDELITY Double End Skein Reeler. Also available in Single End.

SAVE SPACE . . .
SAVE LABOR
and it's easy to operate

This new FIDELITY Skein Reeler permits each operator to handle four or more machines . . . a control automatically shuts off each machine when the predetermined skein weight has been reached. Machine down time is reduced by from 50 to 90% and labor efficiency is correspondingly increased. Compact, modern design streamlines your plant and provides the answer to lower manufacturing costs to meet competition.

Write for complete information on how you can cut down time and increase profits.

Manufacturers of intricate precision machinery since 1911.

FIDELITY MACHINE COMPANY INC.

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Lubricating Saddles · Adjustable Levers · Lever Screws · Locking Stirrups

DIXON LUBRICATING SADDLE CO.
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Bristol, Rhode Island
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POSITIONS OPEN—MEN WANTED: Salesman for chemicals for Southern mills; superintendent rubber covering plant; chemists and laboratory men; chief power engineer; cotton cloth mill superintendent; superintendent for rayon piece goods bleaching, dyeing, finishing and printing; superintendent new filament rayon fabric mill; overseers dyeing and overseers finishing for rayon and acetate fabric mills; slasher tenders and loom fixers for cotton and silk mills, etc.

We invite correspondence (confidential) with mill men seeking new positions and employers seeking new personnel.

CHARLES P. RAYMOND SERVICE, Inc.

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Over 50 years of Confidential Employment Service for men seeking positions and employers seeking men.

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NEW S.S. or Copper Dry Cans
NEW Tubing and Examining Machines
NEW 1, 2, 3, 4, 6 B.B. Print Machines
NEW S.S. Kettles, Tanks, Etc.
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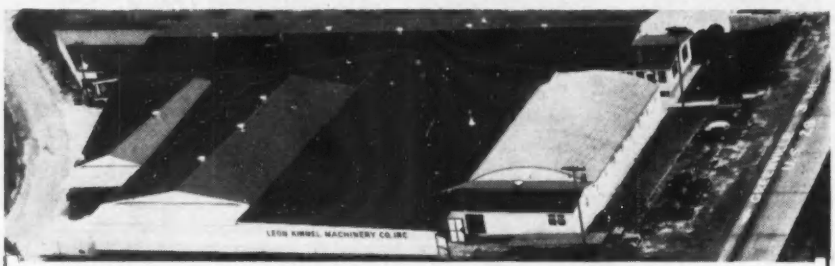
WANTED

ALL SURPLUS EQUIPMENT

FROM A SINGLE ITEM TO A COMPLETE PLANT



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Specializing in the Purchase and Sale of Used Textile Preparatory and Finishing Machinery.

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DYESTUFFS

Will buy your surplus and obsolete dyes and chemicals for cash.

NEW ENGLAND PRODUCTS CO.
91 Oliver St. Boston, Mass.

POSITION WANTED

Cotton Mill Superintendent, 31 years of practical experience in all phases of manufacturing, desires change. Able to manage labor to best advantage. Good producer. Enjoy excellent health, sober habits, and not afraid to work. Textile graduate, age 47. Good references. Box 267, TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga.

POSITION WANTED

Available soon: Assistant superintendent or night superintendent, 12 years experience. Would consider overseer spinning in good cotton goods mill if you have an opening for any of the above. Write for references. Box 257, TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga.

FOR SALE

One 60" Van Vlaanderen 3-roll cloth calender, almost new, steam-heated roll, with motor, price $3500. Box 263, TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga.

FOR SALE

One new 30 spindle model T Junior Lazenby cop winder with 5 H.P. 220 Volt motor, full equipped to wind paper cops 1⅝" x 11" ribbon and twisted paper yarn, has steel super structure for 20" diameter cakes, ball bearing rewinding spindles, price $3,000.00. Box 262, TEXTILE INDUSTRIES, 806 Peachtree St., Atlanta 5, Ga.

HELP WANTED

INDUSTRIAL ENGINEER: Large firm manufacturing fabric and plastic products requires services of young industrial engineer. Experience in sewing plant desirable. Trainees considered. Write full details to: Crawford Mfg. Co., Box 1496, Richmond Va., Attention, A. S. Gowen.

FOR SALE—COTTON YARN

36,000 lbs. 36/2 Cross K P cotton double carded dyed Nude on cones suitable on Rochelle, Flat or Circular machines. Below cost. MARK CORADI, 85 RIVERVIEW AVE., CLIFFSIDE PARK, N. J.

POSITION WANTED

As Second Hand in Carding. Experienced on synthetics and blends. Good references as to character and ability. Will go anywhere. Box 265, TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga.

POSITION WANTED

Production Control—Quality Control—Cost Control. Age 27, married, graduate University of Georgia with AB degree; Major in Psychology, Minor in Mathematics. 7 years experience in Production Control, Time Study, and General Textile Engineering Training. Minimum Salary $300.00. Box 264, TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga.

WANTED

by manufacturing concern in New York metropolitan area: Chemist with A.B. or M.S. for research and development of products for textile processing and finishing. Work is mainly in laboratory with some field service. Thorough knowledge of textile processes, preferably gained by mill experience required. State age, education and qualifications. Reply Box 266, TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga.

FOR SALE

2—90" Stainless Steel Jigs
1—90" 2-Roll Padder
1—10-Fan Loop Dryer, 40' x 92" revolving sticks

CADGENE MACHINERY COMPANY
P. O. Box 1206
PATERSON NEW JERSEY

POSITION WANTED

Textile Machinery Engineer, practical man, 20 years experience machine design and field work. Thorough knowledge of the following: Cotton Spinning, Twisting, Roving, Carding, Long Draft Systems, Rayon Redrawing and Uptwisting. Capable of organizing and heading department. Box 268, TEXTILE INDUSTRIES, 806 Peachtree St., Atlanta 5, Ga.

POSITION WANTED

As Banner Wrap fixer or boss knitter. Am expert on all phases of half hose manufacturing. Can supply best of references. Box 269, TEXTILE INDUSTRIES, 806 Peachtree St., Atlanta 5, Georgia.

POSITION WANTED

AVAILABLE—For position as manager or assistant manager of bleaching, dyeing, finishing plant. Dope formulations, book cloth, industrial finishes, chemical engineer graduate, 20 years' experience, best of references. Box 270, TEXTILE INDUSTRIES, 806 Peachtree St., Atlanta 5, Ga.

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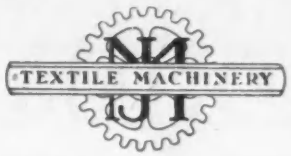
PROMPTLY



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ECONOMY BALING PRESSES
ALL SIZES FOR ALL PURPOSES
LARGEST LINE BUILT IN U.S.A.

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All Kinds of
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and
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RED SPRING ROAD
ANDOVER, MASS.

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GREENVILLE • SOUTH CAROLINA

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Renovate Your Twisters With SAFE Oakite Cleaning

YES, really clean them—and without using volatile solvents! Here's how: After excess lube grease has been removed, dip cloth in solution of Oakite Renovator and wipe on surfaces. The fast emulsifying action of Oakite Renovator (no fire hazard because it's water-mixed) completely breaks up and removes grease deposits. With dirt gone, dry-cloth wipe your twisters—and the job is done easy as that.

For a show-how demonstration of Renovator's cleaning action right in your mill, call your nearby Oakite Technical Service Representative. To read the facts about the many Oakite materials and methods specially designed for the textile industry, send for the "Oakite 66 Digest". No obligation, either way.

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SPECIALIZED CLEANING MATERIALS • METHODS • SERVICE
Technical Representatives in Principal Cities of U. S. & Canada

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ATLAS BRAND
EMERY FILLET

STOCKED BY
THE PRINCIPAL MILL SUPPLY HOUSES AND CARD MAKERS

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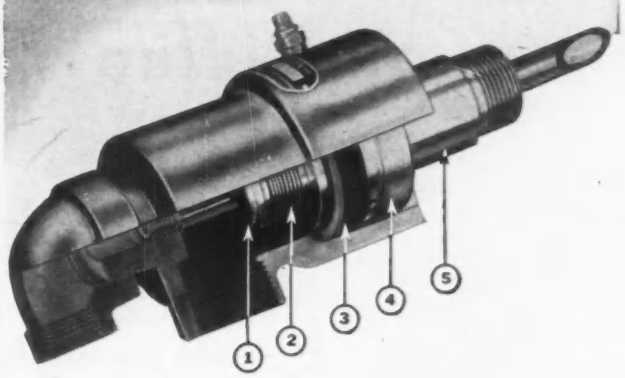

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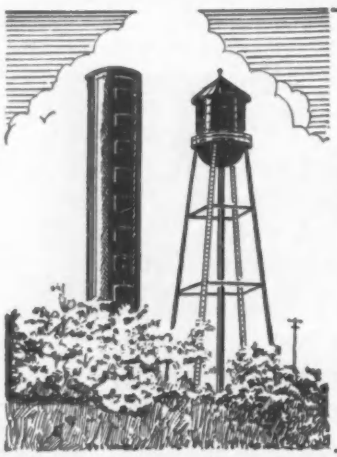

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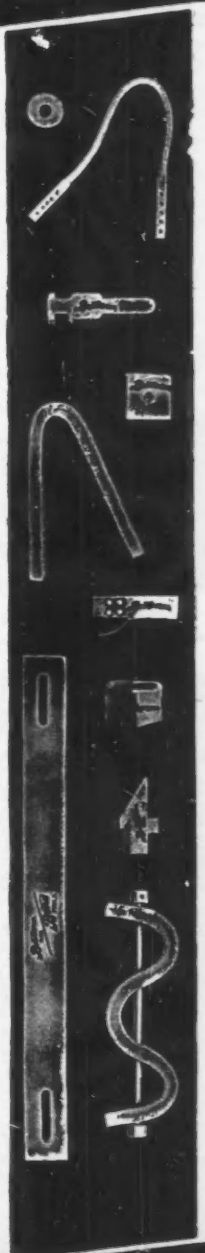

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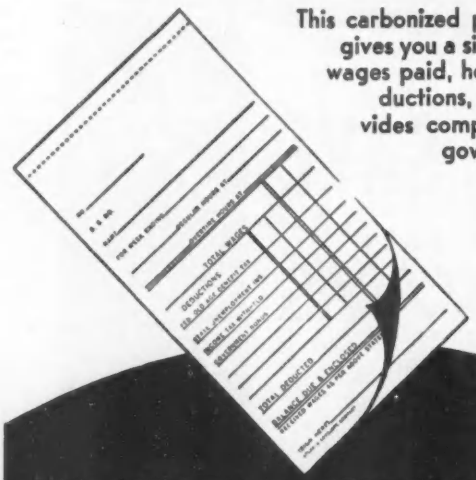

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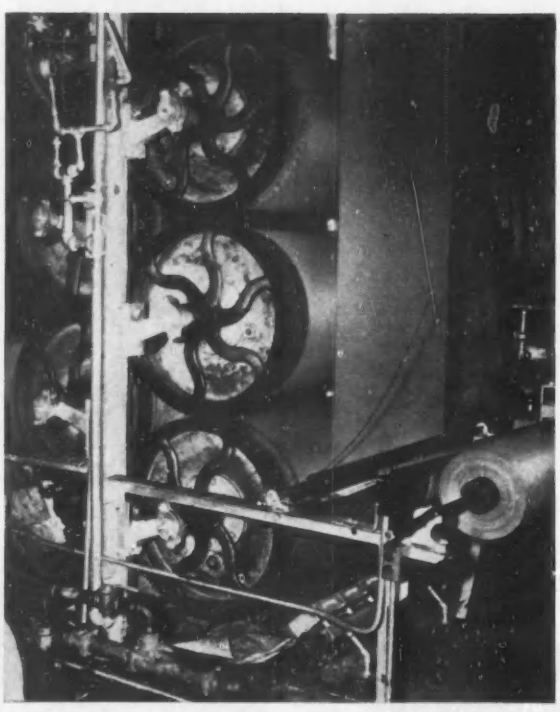

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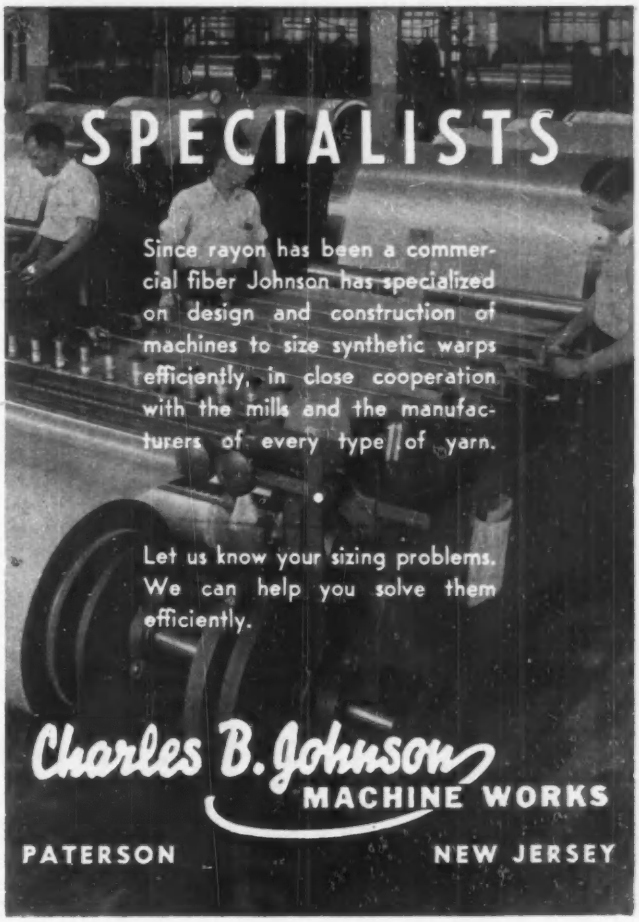
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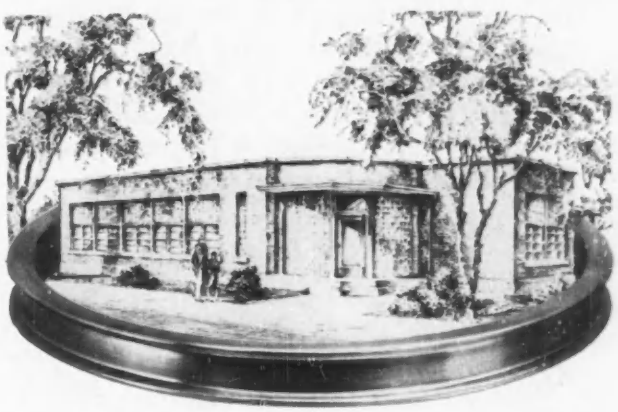

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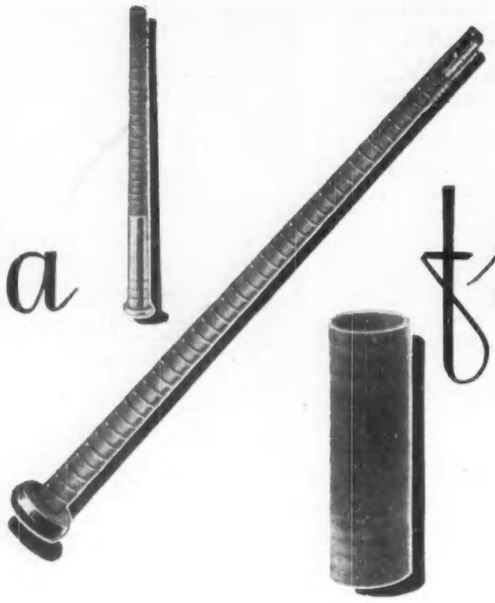

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